

4047

U N C L A S S I F I E D

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NOTEBOOK NO. A-122

Assigned to: H. Blauer
Department: Operations
Station: 901
Date: 6-26-50

DUMMY RUNS; see page 9-144

2nd 5611

*6745 nithic acid
& spix*

This document has been approved for release
to the public by:

David R. Hamrin 7/8/96
Technical Information Officer Date
ORNL Site

7-10-50 ① Melted out 4 cans of sulfur. - started
12-8 extraction in E1 + E2

Blood

- ② Checked Whirly-pumps in 706-D.
- ③ Continued operation of evaporator.
- normal operation.
- ④ The Pile units were brought down to
the packing area.
- ⑤ Plated small needles of Cobalt. - Took
all of them from beaker #44⁸⁷. They are
all plated and most of them removed
from the plating cylinder. There are
still some left in the cylinder - but
they are so small that there is it is
very difficult to "fish" them out!

⑥ - Note: Pile units #65774 did not get
full amount of radiation; it is in
the carrier at the packing area.

Pile unit #65775 would not fit in
the carrier; it is still up at the
pile bldg.

7-10-50 ① Maintenance installed new stainless
8-4 steel bracings under A-11 tank
Blauer ② Electricians replaced bad conduit to A5 and
A-1

③ Moved all but the few pieces of Cobalt left
stuck in plating cups back into Beaker #11.
These came from beaker #8.

④ Brought down all the cobalt needles from

beaker #15 plated them & returned them to beaker #8.

⑤ Maintenance removed forms from cell in 706-D floor

⑥ Maintenance still laying drain pipe in 706-D floor.

⑦ Captured truck from K25 into C-7.

⑧ Maintenance painted the panel board at the evaporators.

6/10/50

4-12 ① Due to an operating error, product in E1 was Sacks lost. 2 liters of solution taken to 204 Blag from E2. Both tubes reextracted. Boiling down E2 extract at 204 Blag at shift change.

② Melted out 4 cans of sulfur into two tubes. One tube is under the heater and ready to go into autoclave. The other tube is in the hot can immediately south of Beagle-Beagle. An autoclave gasket is on top of this hot can.

③ Checked Iodine dissolving in C Blag.

④ Continued Evaporating at tank farm.

⑤ The Co Plating is all shot. 8-4 shift left word that there were six pieces out of beaker #2 in the carrier ready to be plated.

Hell, you can't even see the stuff it's so small.

One piece did resemble a very tiny needle. Some of it looks like ground up powder. The stuff is magnetized with the current off to the extent that you can't drop the stuff off after you've picked it up. Think we did drop

7-11

12-

Blas

some of it in the plating beaker, but don't see how we will ever get it put into the probe. Most of the Cobalt is back in the carrier (I think). None & it has been plated.

7-11-50 ① I¹³¹ dissolving continued all shift.

12-8 ② E₁ & E₂ was cooled at 3:00 AM. and two Blood new extractions were started. The two old tubes were placed in a hot can at south door labeled, "Save for P.B.orr" - (tube from E₁ on the left and E₂ on the right).

③ Extract of E₁ & E₂ boiling down at 204.

④ Evaporator Operation normal.

⑤ Plated Cobalt to-night! - see as follows:

(a) six small needles from beaker #15 - we could only find two needles in the carrier. They were put into plating cup, plated and we could only remove 3 pieces to the carrier. Took them up and placed them in beaker #15. Later when making a survey of the barricade, we found one unplated needle on a lead brick where the carrier was placed. - It is still thin.

(b) We brought the following back in the carrier from the file canal:

- from beaker #3 - 2 ea. $\frac{1}{8}'' \times \frac{1}{8}''$ pellets
- 1 ea $\frac{1}{16}'' \times \frac{1}{8}''$ pellet.

- from beaker #5 - 1 ea $1\text{cm} \times 1\text{cm}$. pellet - (red hot)!
- 2 ea $\frac{1}{16}'' \times \frac{1}{8}''$ pellets.

(over)

(c) The readings obtained by Cutie Pie at the pile bldg. apparently were not correct, because when we got them down to the plating section our readings were much higher. When the carrier cover was removed and the large pellet withdrawn, we had an alarm signal. We moved this pellet as rapidly as possible to the plating cup - put the cover on the carrier and a cover on the plating barricade (the Reading at the top of the barricade of plating cup was about 2.5 R/hr.) without cover. Changed operators and plated same.

It is possible that some of the other small $\frac{1}{16}$ " needles were clinging to the ~~large~~ pellet. We did not stop to see! We planned to take the other pellets out of the carrier and lay them on a sheet of paper, then remove the large pellet which was so hot to the carrier well - then plate the remaining pellets on the paper and return them to carrier - then take the carrier back and put the pellets in their respective beakers. It is possible that these small needles will get mixed with some of the other small needles not removable from the plating beaker.

- 7-11-50 ① Maintenance has almost finished
8-4 the process drain pipe line.
- Blauer ② Maintenance has started installation
of the fire water supply line.
- ③ Pipefitters replaced & tightened all flanges
on A1, A4, A5, A6 + A7c which could
be reached from the floor.
- ④ Ran both steam turbines 4 hrs.
- ⑤ ~~Pipes~~ Put pellets from breaker #5 into
breaker #5
- ⑥ Put pellets from breaker #5 in carrie, &
is at file building. These are to go to breaker
#2.
- ⑦ Breaker #4 is the only material
remaining to be plated.
- ⑧ Had to repair Cobalt equipment after
completely tore up the rectifier equipment.
- ⑨ Maintenance still installing steam + air
lines across the tank farm.
- ⑩ Decontaminated the Cobalt carrier from
10 R to 75 m/s/hr.

6/11/50

- 4-12 ① Turned cooling water on extractors at
Sache - Beagle - Beagle at 11 p.m.
- ② Boiled down excess to 100 ml at 204.
Ready for mid-night extractions.
- ③ Continued evaporating on tank farm.
- ④ Couldn't get any Cobalt down to 908 Bldg.
Pile shutdown and then some special work
at 105 Bldg prevented them from even

unloading stuff. The 8-4 shift took up there.
Talked to C. Gathen at 11:30 p.m. He doesn't
think the 12-8 can load any either.

7-12-50 ① - We could not get any Co from the pile.
12-8 They had other important work in
Blood progress.

② Took up E1 + E2 extracts + started
re-extractions. - Bailed extracts down
at 204 and continued on as run P 359.
The 200 ml. 0.5 N HCl in crude evaporator
is ready to transfer to S1. Replaced Crude
filter with a new one at 204.

③ Jetted M1 mixing tank (which was
over flowing) to A5 and A5 to W5.

④ Cleaned barricade where Co carrier is
placed - found one $\frac{1}{16}'' \times \frac{1}{8}''$ needle of Co -
placed it in the plating cup.

⑤ Evaporator operations normal.

7-12-50 ① Maintenance plugging leaks in 706-D drain
8-4 Also continued work on fire water line.

Schaeck ② Used King + Masles hydromill cleaning
out vision column doorway.

③ Continued steam-air line work on TF.

④ Removed cell blocks ARI, AR5, G85 and C12. Put
one block into G8. One more to go into J8. Pipeliner
removed line from T8 + G8 plug holes and started
welding caps over openings on A9.

⑤ Continued evaporating

7/12/

4-12

Sads

7-13-

12-8

Blood

Removed lines from BII stage tank.

- ⑦ Contact microphones on Al reinstalled.

7/12/50

4-12 ① Brought down Final Product from 204 Bldg and Sacks submitted samples to lab. 3749 mcs at S.T.

② Pulled Extractors at Bagle-Bagle and put in tubes in hot can as per instructions. Extracted.
Old tubes put back in hot can. Facing West, left hand tube goes in E1 and right hand tube goes in E2. Completed boiling down of crude at 204 Bldg.

③ Boiled down Iodine in Room Ten. About 200 ml left to Evaporate. Heat off at shift change.

④ Talked to W.M. Stanley of the Pile Dept at 4:25 p.m. 105 will be unable to load any Cobalt until tomorrow on day shift.

⑤ Continued Evaporating on tank farm.

7-13-50

- 12-8 ① Couldn't get any Co - (Pile operations on Ta)
Blood ② Finishing boiling down I¹³¹ in Rm. 10.
③ Bagle-Bagle extracting all shift.
④ T.T. evaporator operations normal.
⑤ Washed down decontamination Rm in 706-D
⑥ Decontaminated fissile Column floor in 706-C
Washed down versene - Washed down citric acid - nitric acid - soda ash - nitric acid. Tried to flush some of the lines with HNO₃.

7/13/50 Faintes lettered panel board at EV.

- 8-4 ② 205 bbls washing down cells into W1 & W2.
 Schaech ③ cut and pulled A8-A8 jet & line. Cut and
 pulled discharge side of A1-A9B jet line.
 Cut & pulled A11 spray gun. Pulled one blank
 flange off A11. Placed flanges with discharge
 lines on A11 (A11 spray gun) and on A8 (A8-A8 jet)
 ④ Poured cement footings and covered during
 fire with concrete.
 ⑤ Welded regulator valve handle and finished
 tapping open line on A9.
 ⑥ Fire line checked and back in operation.
 Pipefitters placed plug in fire line coming
 into cell A.
 ⑦ Riggers placed A17 tank into A cell under A11.
 ⑧ Welded A11 spray gun & dip leg into A11 tank.
 ⑨ Pulled plug at W7 and replaced with a
 lead shield. A whirly is set up at W7 and
 is to be turned on immediately in case of
rain.
 ⑩ Replaced tygon lines at S.B. & D.B. samples.
 ⑪ Jones started work on building supports
 for all ventilation ducts. ✓
 ⑫ Continued evaporating.
 ⑬ A8—A8 thermocouple pulled out.

7/13/50

- 4-12 ① No Cobalt plating until tomorrow.
 Sachs ② Attempted to move material around fission
 column cell. There is insufficient light and

7-14-

12-8

Bloos

7/14/

8-4

Scha

most transfer routes seem to be clogged up.
Ecking says to just let it alone until tomorrow.

- ③ Cleaned up waste material in Cell A.
- ④ Continued Evaporating on tank farm.
- ⑤ Took E1 extraction to 204 Bldg along with
2 liters of solution that were already in the
flask at 204. Ready to boil down. Brought
the E2 extraction to 906 Bldg.

7-14-50 ① Boiled down extract at 204.

② Found anti-foams line plugged to evaporator
Blood. on tank farm. - Unplugged & replaced tygon line.
- operations normal.

③ Washed down decontamination room at 706-D.
Product cone still reads 50/hr. - used HNO_3 - 3.50/hr.
Cone is now boiling in citric acid.

④ Couldn't locate the key ring in Superv office

7/14/50 ① Installed plugs and extension handles into
8-4 plugs PR1, PR5, & CR5. Pulled and replaced
Schach plugs C1, T1, T2, E3, PR6, B2, C5, C6, & R13.

- ② Pulled more ammt potings.
- ③ Welded 417 tank onto supports.
- ④ Electrician started rewiring line under
2nd level. Also replaced cordelt on A1
contact mike. Instruments finished tying
and checking mike.

- ⑤ Shut down fans & blower while maintenance
worked on dust. Back on at shift change.
- ⑥ Check valves V30, V31, V32 and flanged

on piping. Putting the following in at shift change. Moyle K line 413 to V32

" 3 " 423 " V30

" 4 " 422 " V31

⑧ Received Chicago truck, unloaded, and cleaned 3 pots & 4 drums. There are three pots in the center of 903 to be cleaned.

⑨ Continued evaporating. Raised pressure to 50%
⑩ 4 drums & pot went into W7 — 5 pots content went to W5.

⑪ Prewelded air line supply to new sparger on A-11 tank

⑫ Instruments capped & plugged thermocouple conduct & conduit on A-8

⑬ Maintenance still installing steam line across tank farm.

⑭ Delivered all old cellulose plugs to burial ground & stored.

7/14/50

4-12 ① Continued Evaporation on tank farm.

Sacks ② Finally got seven Cobalt needles out of Beaker #14.

With no experienced electric truck drivers, it took 45 minutes to get the carrier behind the barnacle. 7-16

Removed carrier lid and that's the way things stand at shift change. Will pass on verbally the information concerning other needles in Beaker #14 to R. Schaech on Sunday at Benoit City Golf course.

③ Installed a temporary floodlight in Fission column cell and washed vessels and lines with

7-

7-15-50

8-4-50

7-15-

7-16

7-16

7-16-

290 Versene solution.

(4) Blew out and cleaned three remaining Chicago Pots. Had everything smeared.

Everything was O.K. to go except Drums # 70 and 67 ad. Renewed these three drums, and they are ready to be resmeared.

7-15-50 12-8 H.B.

1. Continued evaporator at tank farm.

2. Drums 5 & 67 still hot on sides. Ends O.K.

7-15-50 Continued evaporator at tank farm -

8-4 G.P. Had a Paper-shpt dam for 2 hrs.

from 8:00 A.M. to 10:00 A.M.

Shut off A-16 off gas for for 2 hrs -
at ~~8:00 A.M.~~ Started A-16 up at 3:30 P.M.

7-15-50 4-12

Pump at W7 running at shift change.

7-16-50 12-8 H.B.

1. Continued evaporator.

7-16-50 8-4 G.C.P.

continued evaporator at tank farm -
Had mast to repeat. South still
in 706 D.

7-16-50 4-12

Dumped Run 506 and started #507 at evaporator

7/17/50 ① The 900 area off gas filter house is reading up to 12-8 1500 m³ where solution seeped out thru cement Schach blocks.

- ② Brakes on pickup need repaired.
- ③ Scrubbed and cleaned two hot drums. Monday.
- ④ Three lights out at 900 area stack.
- ⑤ Molted out 4 sulfur can and started two extractions.
- ⑥ Continued evaporating. EV L.L. control valve is not functioning properly.
- ⑦ Brought pile shits to 903 bldg.
- ⑧ No exposure time to plate Co. They are still behind paricade.

7/17/50

- 8-4 ① Continued Evaporating on Tank Farm. Still using Sacks E-F to EV by pass valve when air operated valve quits feeding properly. every hour on 90. Instrument man checked automatic valve, but couldnt find anything wrong w/in it.
- ② Work continued on installation of South Tank Farm steam lines. Also, G. A. Jones started work on Cell duct bracing behind 706 D Bldg.
- ③ The Filter box on hot off gas line has been by-passed in order that maintenance can repair scale in the Filter box. Kept hosing off contaminated area at 900 stack but water is still hot at shift change. Maintenance as yet has not been able to locate the scale in the Filter box.

④ Work Done in Cell A.

- Two lines were installed from K plug to W12 stand pipe.
- The A18 condenser was installed but it will have to be moved upwards about 1 ft. At present the discharge from A18 to the bottom of A16 is running uphill.
- The A17 to A9 line and A17 to A8 line have been installed in entirety (steam line, set, and discharge line).
- Checked A11 air sparger. Working O.S. maintained installed P.V. gauge on A11 sparger.
- The piping from Ammonium cylinder to A16 scrubber was removed.
- Electronics mounted conduct piping on West side of Cell A.
- Wooden forms around base of monorail supports were pulled out.

⑤ Plated 7 cobalt needles from Beaker 14 but can't get them all out of plating cup. If the 4-12 has any success with this, will they leave a note for Isotope control.

⑥ Remove Column 4 turntable from fission column cell in 706C Bldg and continue with decontamination of cell floor.

⑦ Six Chicago Dots and three drums were sent on train way.

⑧ Two more lines were put in Cell A. A1 - A11 set and A11 → 154 plug.

14

7-17-50

4-12 ① Tank farm - jettling from W10 - W5.

Blood Evaporator Catch tank shows a high activity value on the recorded but the sample taken gave 83 Counts - Continued normal operations.

② Scrubbed down the Cement pad around 905 area hot off gas filter. High readings now appears to be 200 mcr/hr.

③ I^{131} dissolver off - gas failed between 10:30 + 11:30 p.m. - Col Cooled off.

④ Washed down 706-D Decontamination room.

⑤ P - Soiled down at 204. - Re-extraction is in progress at bagle - bagle!

⑥ Decontaminated turn - bushels + funnel rack for fission columns to 15 mcr/hr. (These are in 706-D decon-Room)

⑦ Took 2 pellets of Co to pile bldg. - Couldn't remove anymore from the cup. These should go into beaker # 5 (as per log-book 7-10-50) Pile operation couldn't get us anymore. Co carrier is up at the pile bldg.

7/18/50 ① Jettled FI off gas pot 5 times and finally 12-8 got 30% vac. Started dissolving 12:45 PM and Schieck took hourly readings.

② When will W10 start flowing?

③ Cleaned up mess in front of Cell A.

④ Maintenance oilied vacuum pump 706-D.

7/18/50

8-4

Sack

- ⑤ Took up α^{32} extraction at 2 A.M. and started reextraction. Boiling down crude at 204 Bldg.
- ⑥ Continued decontamination at filter house. Highest reading on E & West sides - 60 mrem. Winds up to 150 mrem (Hard shell)
- ⑦ Continued fitting W10 to W5.
- ⑧ Pile Bldg trying to extract α^{32} pellets from Al cover. No results as yet. See ⑩
- ⑨ Continued evaporating.
- ⑩ Pile Bldg has 6 pellets loaded in carrier and ready to come down. The rest of the pellets (approx. 12) are free of HL and can be loaded.

7/18/50

8-4 ① Pulled two 3rd Extractions on Russ 360 and Sacks 361 at Bagle. Did not reextract. Tubes are still in autoclaves. Took crude to 204 Bldg and turned over to G.T.R. Sutton.

- ② The following new lines were installed in Cell A to-day.

- ① Line from discharge side of A18 heat exchanger to bottom of A16 scrubber (417).
- ② Line from A17 tank to Vaccinogauge (436)
- ③ H.P. Air sparger to tank A17 (403) ^{401, 419}
- ④ Inlet and outlet water to A18 heat exchanger
- ⑤ Steam line to A17 - A18 jet.
- ⑥ Dip leg on A17 - A18 jet.
- ⑦ Ran both steam turbines for four hours.
- ⑧ Please note: The large \downarrow handle valve

on A16 - 706D line is closed. Also the slide valve at the manifold is closed. Blauer wants these valves left this way.

- ⑤ Cleaned up scopes and covered ~~the~~ mirrors with paper.
- ⑥ Maintenance drilling hole through Cell A wall. This will be Plug L8. Almost through at shift change.
- ⑦ Electrician removed more conduit on East side of Cell A.
- ⑧ H.P. steam line to P.B. #3 was cut ~~out~~ 7/19
out.
- ⑨ Continued Evaporating on Tank Farm.
- ⑩ Continued setting from W10 → W5. Still going at shift change.

7-18-80 ①. Pile operations did not have time to load the remaining Co in beaker #14. It was Blood planned to plate the remaining pellets in #14 all together. As it now stands, Pile operations say they may be able to load the remaining pellets in #14 on 12-8 shift. The carrier now is supposed to have some un plated Co (6 small pellets) in it - at the pile bdg.

- ②. Tank Farm Evaporator Operations normal.
- ③. Started Extractions at Bagle-Bagle. - 3 cans in each tube!
- ④. Pickled 10 new sulfur cans at Cell #5. Dried them in ovens - and filled. 1 + perhaps 1 more will be filled at shift change.

- ⑤ Took up P at 204 - and boiled extract.
- got about 4.5 C - (.2 normal + 6.7-CQ) ?
- ⑥ Turn-table for fission Columns in 706-D
decontamination ^{room} was decontaminated - 6 mr/hr.
- funnel rack still read 15 mr/hr. - Funnel rack
is in the drum. Turn-table is stored in makeup room.
- ⑦ At 5:30 P.M. the ~~left rear~~ pick-up truck had a
soft tire on the left rear wheel. Couldn't find a
spare, so maintenance filled it with air. - It
is still up at present.

~~7/19/50~~

- 12-8 ① Plated Six needles from Bealeen 14 to
Sachs Bealeen #5. There were supposed to be 12
in it, but only six went back to the carrier
from the plating beaker. According to the
Pile, that was the end of Bealeen #14.
Confusion reigns supreme.
- ② Pulled E1 extraction at 7 a.m. and
reextracted. E2 is due to come off at
9:45 a.m. Crude is in Flash at Bagle-Bagle.
- ③ Pulled 5 am sample from W10-W5 transfer
line.
- ④ Continued melting. Filling 5 cans at
Cell II. Last one is now under melter.
One can with note attached reads 875
more grams of Sulfur.
- ⑤ Continued Evaporation on Table Four.

- 7-19-50 ① Pulled filters out of hot off-gas filter box Blauer and buried them. Washed out box, tried to locate 8-4 leak & failed. Left drain valve open. Will well all the ~~spares~~ filters in the filter box tomorrow.
- ② Contained tank from evaporation. Replaced conductivity tube in monitoring set-up.
- ③ Shut off W10-W5 jet after steaming the line at 9:30 A.M.
- ④ Installed funnel addition line to A-17 tank, pressure relief valve + line, line from C12 plug hole to W12 drain, line from Hg tank to C12 plug hole, line from C-11 plug hole to H-17 tank.
- ⑤ Cut new plug hole L-8 through cell wall. Started on plug hole M-8.
- ⑥ Ramsey & Schallert removed some stuff from 706-C column cell. Hard floor acid + water.
- ⑦ Unearthed lines to manifold lid on W-9, cut them & reset the lid. The lines will have to be rewelded.

- 7-19-50 ① 24 Co needles of various sizes were taken 4-12 from the plating cup to beaker #5.
- Blood ② Used up exposure time laying lead sheet in the fission Column Cell. Most radiation now appears to come from overhead, lines & Sump. Readings up to 6R/hr.
- ③ I^{131} was boiled down.
- ④ P at 204 is boiling down - 2 liters to go.

7/20

12-3

Soil

- ⑤ Extractions at Bagle-Bagle in progress.
- ⑥ Tank-farm evaporation operations normal.
- ⑦ Left rear tire was found soft (pick-up truck) at 11:30 P.M. Maybe more air will do it again!
- ⑧ Note: - Pressley's Column at far end of Co barricade in 908 - ~~E~~ Recorder records activity - we should keep the recorder on scale, however no activity rise is expected to-night. The turn-table sampling device should sample according to time relay.
- ⑨ Difficulty was encountered with the stop-cock on the vacuum volume flask. ~~E~~ It would not turn - so product was siphoned (after obtaining volume) to Carrier flask and a Composite sample of E1+E2 was taken from the Carrier flask. ~~E~~ ~~when~~ No product was lost! After product of E1 was siphoned into Carrier flask, I tried to open the stop-cock and broke it off. Then we stopped up the bottom and used the flask for volume of E2 Extraction. Couldn't find a replacement.
- ⑩ Rod measurement of W-10 - 4'-11 $\frac{1}{2}$ " - Rod was unjointed and stored in low storage.

7/20/50

- 12-8 ⑪ Sprayed HNO₃ over Fission column cell, holed socks out and threw citric acid over Cell floor. Soaking them at shift change.
- ⑫ Pulled two extractions at Bagle at 5 a.m. Sampled both as a composite, and took crude

to 204 Bldg and continued boiling down. Reconstructed E2. Heat on at 5:45 a.m.

③ Continued Evaporating on Tank Farm. Dumped two runs this shift.

④ Checked Pressure's column at 908 Bldg. Put another bottle in sample turntable at 6:45 a.m.

⑤ Will day shift try and have the car loaded in truck left near time of our Pick-up Fixed?

7/20/50 ① Had a foamover at the evaporator

8-4 ② Maint. tied in the line from 706-D to W-9 + Blauer is leveling the lines from W-12 + new research area to W-9

③ Maint. rewelded all bottom welds on the off/gas filter box, checked for leaks, installed new filters, put on cover. Blanks will be removed tomorrow & filters placed back in service

④ Maint. started removal of Panel board #5. Started cutting out a section of second balcony over P. B #3

⑤ Jones still bracing ventilation duct back of 706-D

⑥ Finished drilling hole M8 in West wall of Cell A

⑦ Finished running pipe from plug hole C11 to plug hole L8

⑧ Ran 3 lines from plug hole M-8 to W-12 drain

⑨ Finished lines from A-17 to manometer series

7/21

12-3

Sec 1

- ⑩ Maintenance brought up old motor from burial ground to rebore shafts for A-5 motor.
- ⑪ Electrical shut down at 3:45 P.M. Power back on 3:55 P.M. Checked all building blowers, vacuum pumps, distilled water pumps, off gas fans etc.
- ⑫ Made up glassware rinse carrier for 4-12 shift.

- ① The glassware rinse from B-20 & 21 is in the carrier on the east side of A-Cell.
- Reading over 10 R/hr with Plug out -
Decontaminated equipment & had H.P. check 3rd level of 706 D. - all OK.
- ② The hoist on the 3rd level needs repair.
It would barely lift the cell blocks & Carrier - doesn't sound right when lifting heavily.
- ③ At 10:30 P.M. the sump of A-Cell was found flooding the cell floor - Used whirly pump and pumped it out.
- ④ Took up P-product 2100 + mc.
- ⑤ Used whirly pump at W-7 when necessary.
- ⑥ Tank farm operations normal.

7/21/50

12-8 ① We are now operating the Evaporator with both the E.P.L. and Sp. G. out of wack. The trouble started with a plugged Sp. G. line and got progressively worse from that point.

② What did you turn the page for? That's all there is!

7-21-
4-1

- 8-4 ① Evap. has been down since 1 P.M. with
7-21-50 instrument trouble.
- Blauer ② Maintenance tied in lines from W-12
to W-9 + Research area to W-9.
- ③ Maintenance still running steamline
across the tank farm
- ④ Maintenance cut out section of
second floor balcony.
- ⑤ Maintenance put in jet & TROG to A-20
old lines to + from this jet. The steam supply is from
⑥ Maintenance tied in extension handles
to 3 valves on A-17
- ⑦ Maintenance has a new A-5 motor
ready to go into the cell. This came from
the burial ground
- ⑧ Removed P. B #3 + stripped of all
instruments + piping.
- ⑨ Started bracing pipes in Cell A.
- ⑩ Capped off 3 blank nozzles in Cell A on
A-17 tanks
- ⑪ Put glassware rinse run #42 into the garden.
- ⑫ Bloright + glassware carriers from run #41
+ run #42 from garden into 706-D. Put cones
+ plug into barrel. Stored carriers + lids.
- ⑬ Unloaded Chicago truck.
- ⑭ Hot off-gas is now passing thru the filter
box.
- ⑮ Tested ~~Cottrell~~ precipitator by means of air flow.

1st 7-21-50 ① Decontaminated drum & pots in 903.

th 4-12 H.P. passed all but smcar #24 & 30 for
Blood AEC truck sp shipment. These spots were
~~cleared~~ but not smeared again.

#24 Top of pot at N-end.

#30 Top of drum.

line ② Did the house keeping.

③ Took I¹³¹ carrier to Pile Bldg

20 ④ The sump of A-Cell was checked. - Should
be checked incase of overflow. - In case
of over-flow, use the whirly pump.

from ⑤ Started Evaporator up on manual feed.

es Ev-LL manometer, Ev-Sp.G. manometer. Maint. had
LL on instrument control at 10:00 P.M. - but
took it off automatic control till they finished
working on Sp.G. At 12:00 midnight Sp.G. at
about 1.18 - boil down to about 20 inches & dump
to WG. Assume Sp.G. of 1.3 if, the Sp.G. cannot
be obtained from Sp.G. manometer. (Sp.G.
manometer has a tendency to move up/down.)

1st In operating, if Sp.G. cannot be obtained

- fairly accurately - Consider 2000 gal. as a
batch run. (Mr. Greter of Instrument dept.

*41 Maint. is staying over till he gets instrument
res Sp.G. in shape to use.) - Mr. Blauer & Mr. Orr
wish to have the ~~operator~~ evaporator operating
over the week. Please call them in case
of trouble.

24

7-22-50 12-8 GEP

continued. EV at 10:30 p.m.

checked Presslys column to see that it changes Battles every 4 hrs.

Plant dept finished working on.

Plant in EV at 6:30 a.m. it is off.

4-1

7-23-

7-22-50 8-4

Dumped Run #520 and started #521 at the evaporator

4-1

7-24

Sat

checked Presslys. Col. in 908, Thl.

Automatic Changer fails to reset properly next chang. due about 5:00PM

7-22-50

4-12 1. Checked Pressleys Column at 5:00 & 8:30 P.M.
it worked ok on 3 $\frac{1}{2}$ hr. setting this shift.

2. DUMPED RUN # 521 AND STARTED #22 AT THE EVA.P.

7-23-50 DUMPED RUN #522 - STARTED 523 AT EV

12-8 GEP Checked Presslys column in 908 the
Battle changer is on 3 $\frac{1}{2}$ hrs ~~the last change was at 7:00 AM~~
the last change was at 7:00 AM.

8-4

7-23-50 8-4

Dumped run # 523 and started # 524.

7-24--

Blow

- 4-12 1. Maint. kept W-7 pit pumped out as needed
 7-23-50 2. Pumped water from Cell-A floor with 1500 ft. head pump.
 3. Checked Pressley's column still on 32 hour setting.
 4. Dumped Run # 624 & started 626 at the FuzP, called TUCKER on L.L. INSE, no serious troubles, working on now.

4-12

7/24/50 ① The Pick-up is out of gas at the gas pumps. Sachs Patrol couldn't send anyone up to unhook the truck.

- ② Can't get out WC-1 tank. The stuff must be too hot thermally. The waste in the tank at the present time was sampled on 4-12 shift.
- ③ Brought down Iodine and ^{slug carrier} Pile Units.
- ④ Continued Evaporating on Tank Farm.
- ⑤ Had maintenance replace burned out lights over two big blowers and big steam turbine. The lights on the stack itself are all out.
- ⑥ Pressley's automatic bottle changer seems to be running O.K.

8-4 ① Installed motor on A5 Agitator. - power + ~~lubricant~~

7-24-50 not yet hooked up. - New electrical conduit reqd. + put in.

Bldg. ② Two pipe braces were completed in A Cell.

③ Floor of 706 D - Was filled in for concrete floor.

④ Turned water hose on the filter box of hot off-gas system. - (Water running on inside of brick wall.)

- ⑥ Jetted WC-1 + w-5. Also Jetted WC-1 sump.
 Sump jet to WC-1 is plugged - Repair has been ordered. -(Cover to sump is off to cool interior.)
- ⑦ Maint. ^{painting} cleared pipe corral at tank farm.
- ⑧ Maint. Tied in steam & air line to tank farm over wk-end.
- ⑨ Maint. tore down temporary shelter at Bagle Bagle.
- ⑩ Maint. checked Sp.G. at tank farm.
- ⑪ Evaporator operations normal at tank farm.
- ⑫ Manometer at D.B. was checked - OK.
- ⑬ Tygon lines to S.B. & D.B. were checked - OK.
- ⑭ Checked Cones in decontamination rm. - 706-D stored them.
- ⑮ Metal frame work for A-Cell addition was put in to-day. — Second floor balcony to support cubicle for process filter.
- ⑯ A 18- (A-Cell) was welded into place.

7/24/50 1. Shift attended safety film.

4-12 2. Continued evaporating

Schach 3. Checked FI dissolving in "C" bldg.

4. Picked 20 sulfur cans.

7/25/50

12-8 ① Took Iodine Readings in 706-C Bldg.

Sachs ② Eng. attended safety Film.

③ Continued Evaporating — .

7-25-50 ① Power line & lubricant line to A5 agitator.

8-4 motor was installed and checked - OK. Elect. Maint. Blood also repaired ~~switch~~ switch box on elect. panel board to A5 agitator.

- ② Washed down hot-off gas filter box at 900 Area - too wet to have H.P. smear.
- ③ Had difficulty starting whirly pump in Cell A this morning. Removed it, and finally got it started. (2 R - 5 R/hr).
- ④ Maint. welded steel framework for cubicle support. Somehow they manage to break the "~~SARAN~~" tubing that carries the distilled water supply in 706-D. - They are removing this line and will replace it with new tubing. Distilled water supply ^{Reservoir} ~~tanks~~ are both turned off at the supply spigot!
- ⑤ Tank farm operations & evaporator operations normal.
- ⑥ Attended safety film!
- ⑦ Ran steam turbines 4 hrs.

- 7/25/50 ① Cleaned & smeared monster. It is okay & tagged.
412 ② Cleaned up cement pad around filter box. 12-8 Scheich have H.P. rough smear.
- ③ Pulled empty C¹⁴ slugs from dissolver and cleaned up Cell X. Have hot truck picking stuff in front of Cell X.
- ④ Told Beauchamps that St. Carr wants 3 ml FT dissolving solution diluted in 20 liters of H₂O first thing in the morning. Also another batch later in the day. Bottles are in front of 909.
- ⑤ Have candy machine checked. That rotten odor seems to be coming from it.

- ⑥ Continued evaporating.
- ⑦ Relived Campbell on FI. 12-8 check with Bill.
- ⑧ Backwashed col 1A. Not much success.

7/26/50

- 12-8 ① Boiled down all of Iodine solution in Room 10.
 Sacks ② Had H.P. rough smear hot pad at A1b Filter
 box. Seems to be O.K. Couldn't pick up any
 counts with scaler.
- ③ Continued Evaporating on tank farm. Had trouble
 with Sp.C. instrument again. Wouldn't zero properly.
 Instrument man adjusted ~~on~~ Sp.C. arm with
 set screw. Seems to be going O.K. now.
- ④ Emptyed Cell A sump into the Whirling -.

7-26-50 ① Checked Sp.G. at EV. - Instrument Maint. set the
 8-4 zero again. - apparently OK now.

Blood. ② Repaired the manometer at the D.B. - Installed new
 tubing on pressure line.

③ Checked 900 Stack areas again. All smears
 were counted for alpha (highest Count : 8) but
~~β + γ~~ counts were not complete. Pick up equipment.

④ Lights on 900 stack Area were replaced today.

⑤ Ran AS agitator from 1: till 4: P.M. -
 still running at shift change.

⑥ Cleaned up Bagle-Bagle to-day. - float 10 mr/hr. ±

⑦ L.L. manometer at WC-1 was repaired again.

Found some ~~**~~ leaks - and the tank flooded off-gas
 system. - Jetted WC-1 to W-5 thru N jet.

* S-jet doesn't work. Neither does WC-1 sump jet.

7/26/
4-1

Sachs

7/27/

12-1

Sachs

7-27-

7-28-

Blood

When WC-1 was apparently jetticed empty,
L.L. read 4.6"

⑧ Ev. operations normal.

⑨ Maint. put in forms & reinforcement for
Concrete on cell at 706-D.

⑩ Painted structural steel work.

7/26/50 ① Checked FI dissolving 706-C.

4-12 ② Emptied Cell A rooms with whirly.
which ③ Continued evaporating.

④ 5th sulfur can filling at shift change.

7/27/50

12-8 ① Took readings on I¹³¹ dissolving in 706-C Bldg.

Sacks ② Continued filling Sulfur cans.

③ Continued Evaporating on tank farm.

-27-
7-28-50 ① Maint. installed hood & off gas system for
the melter at Bagle-Bagle. Ready for operation.
Blood. ② Started melting first can of sulfur at 3:05 P.M.
3 more cans are stored at the corner.

③. Maint. poured Concrete for cubicle structure at
706-D.

④. Cleaned up in front of Cell A.

⑤. Contaminated area around Hot-off gas filter
Box for 900 Area has been cleared by H.P.

⑥. Ev. operations normal.

⑦. Had Drain at Bagle-Bagle unplugged.

⑧. Hoist. on 3rd level 706-D is in process of repair.

⑨. Manometer at WC-1 was worked on again today.
Stop up leaks - It can be operated, but trap

30

on air line needs filling with water. Pipe-fitters were notified.

7/27/50 ① Finished melting out sulfur and started extraction at 8:30 P.M.

Schaich ② Continued evaporating.

- ③ Pulled empty C⁴ bags from dissolver at Cell I.
④ Filled one sulfur can and another is filling at shift change. The one that is filled should be rethreaded before use.

7/28/50

12-8 ① Continued Evaporating on tank farm.

Sachs ② Filled six Sulfur cans.

- ③ Pulled Product at Bagle-Bagle. Crude is at Bagle ready to go to 204 lab. 2nd extractions started at 7:45 a.m. Submitted a C1 samples to lab.

④ Pumped out Cell A sump.

7-28-50 ① Maint. working on Concrete Forms for Cubicles.

8-4 at 706-D.

Blood ② Washed down Bagle-Bagle - Unplugged drain again. Extractions in progress.

③ P - at 204 in progress.

④ Maint. is working on 3rd level hoist. Have not located cause of trouble yet.

⑤ Started steam turbines at about 2:00 P.M. Elect. Maint. has been working on Switch Board panel in 900 stack Area. Turbines still running.

7/28/

4-1-

Scha

E.J.W

7-29-5

7-29-

8-4

⑥ Ev. operations on tank form normal.

7/28/50 ① Shut down steam turbine and started 4-12 blowers.

Schaich ② Took up extracts at 8:45 and boiled down at 204. Started 3rd extractions.

③ 12-8 Monday morning. Please take FI slug change to 105 bldg. Also pull C¹⁴ slugs if you have time.

④ Continued evaporation.

⑤ The tolerance on the dump trucks 1/mr
and 200 c's/min AE-4080 is cleared below
1mr but was not cleared due to being wet.

AE 2693 has had the full treatment but still has
a few hot spots up to 5mc. Try using that.

electric buffer which is in 903. There is a flood
light inside 903 which can be set up outside.

The other three trucks have had gross dirt
washed off them but that is all. They are hot.

⑥ Joe Sutton will be in on 8-4 tomorrow to finish
P³² run. The product is in P1 with La sticks.

7-29-50 12-8

Pulling down Run # 540 at all evaporator
at shift Change.

7-29-50 1- Dumped Run # 590 & started 691 at End.
8-4 2- Section on P³² All shift.

7-29-50 4-12 H.B.

1. Continued ~~run~~ evaporator. Started boiling down run 541. Dissolved run 541 at shift Change

7-30-50 12-8

Started run #542 at the evaporator

8-4 1. MAINT. Added oil to 75 H.P. Blower Bearings

7-30-50 2. Continued with Run # 542 at the EV.

3. Pumped water out of Cell-A with Whirley Pump.

7/31

8-

SCH

7-30-50 4-12 H.B.

1. Continued evaporator. Dropped run 542 and started run 543.

7-31-50 ①. The marked urinal in the men's room

12-8 flooded again to-day.

Blood ②. Both lights on the electric fan units (for 900 stack area) are out.

③. Ev. + tank farm operations normal.

④. Removed Ca(N_3) slugs from C¹⁴ dissolver.

⑤. Removed extracts at Bagle-Bagle + boiled down at 204. E₁ + E₂ re-extractions in progress.

⑥. Used "Whirly" to pump out Cell A Sump.

⑦. Took FI slug charger to Bdg. 105 - Not loaded

⑧. Brought down the pile units.

⑨. Track decontamination status as follows:

AE-4080 - Checked - rescrubbed - rechecked + smeared.
- no results yet on the smears.

7/31

4-

SOC

AE-2693 - Scrubbed - checked - rescrubbed

- red - ready for recheck if dry enough.

AE-2692 - Scrubbed - ready for check if dry.

AE-4079 - Scrubbed - " " "

AE-4081 - Scrubbed - checked - rescrubbed

- ready for recheck if dry enough.

- ① The manometer at the D.B. pressures up very slowly. Perhaps this could be checked & repaired on 8-4 shift.

7/31/50 ① Instruments repaired DB manometer.

8-4 ② Maintenance continued work on 3rd level Schach hoist.

③ Pulled all IT plug. Reading 20R at 2 ft.
B20T to B19 line is wrapped around B19 valve.
Sent 1 liter water washes thru B20 line but
All IT reads 27R at bottom, 50R center, and
80R at top.

④ Continued evaporating.

⑤ Mussels to FJ and 903 Bldg. all day.

⑥ Utility men repaired floor by PB 2.

7/31/50

4-12 ① Took hourly readings on Iodine dissolving in
Sacks 706C Bldg. The Sp. C. line is still plugged up. Just
leave as is.

② Continued Evaporating on Tank Farm.

③ Worked on Dump truck parked North of
903 Bldg all shift. One spot in left rear corner
of bed still reads about 2 min/hr.

④ 75 H.P. blower belts are slipping a little

bit. Should be O.K. until morning however.

- (5) The light at R.P. is out. 4-12 maintenance crew will pass the word on to the 12-8 gang.

8-1-50 ① Turned off main steam valve to jet pit & 901.
8-4 as per instructions.

Blood ② Ev. & Tank farm operations normal.
Light at R.P. was replaced.

- ③ At 900 stack, 75 H.P. motor belts still slipping some. Perhaps this can be checked for Maint. if necessary on 8-4.

- ④ Took readings on I¹³¹.

- ⑤ Melted out 4 S-Cans & started P-extractions.
Couldn't locate run sheets - used other blanks.

- ⑥ Status of Truck Decontamination:-

AE - 4081 - cleared by H.P. - Ready to smear
when dry.

AE - 2693 - cleared by H.P. - Ready to smear.
when dry.

If these trucks are to be decontaminated,
may we have some long handled brushes
to work with. - Most of those on hand were
worn out to-night!! (2 Trucks left.)

- ⑦ Note: One S-can #319 appeared to be lighter
than the other. - (Maybe not full.)

8/1/50 ① Cleaned up Bagle Bag. Bought 3 bottles
8-4 distilled water, tongs, bottle, tags, and
Schleich graduate for Bagle.

- ② Millwright finished work on 3rd level hoist.

- ③ Ran steam turbines four hours.
- ④ Maintenance installing extension to 9B-2.
- ⑤ Maintenance repaired WC-1 pit jet. Still working on steam leaks.
- ⑥ Laborers digging drainage line back of 706-D.
- ⑦ Electricians continued work on fan alarm system.
- ⑧ Millwright tighten bolts on 75 HP fan.
- ⑨ Continued evaporating.
- ⑩ Started decontaminating Bagle but main stopped up. Maintenance unplugged but there are still plenty of hot spots at Bagle.
- ⑪ Poured concrete pad next to Cell A wall.

8/1/50 for crud filter cubicle.

- 4-12 ① Finished up Rinshaw's column work in 908 Sacks Bldg and clamped off columns.
- ② Pulled Extractions at Bagle-Bagle and reextracted. Boiled down crude at 204 Bldg.
- ③ 205 Bldg. is hosing down Cell I and sending a lot of water to W1 and W2. Better watch these guys. They'll have W5 running over in no time.
- ④ Worked on decontamination of Bagle-Bagle. Spots on floor read up to 700 m/r/hr. Highest spot now is 20 m/r/hr on floor.
- ⑤ Continued Evaporating on tank farm.

8-2-50 ① All lights were out at 900 Stack area. - Called 12-8 Maint. and they put in fuse.

- Blood ② Took up extract at Bagle. Boiled down at 204. Started another re-extraction. - There is a steam leak on the air line side of E1.
 ③ Tried to decontaminate Bagle - Called H.P. with the following results:

Sink = 80 mr/hr.
 Tygon Tubing = 1.7 R/hr.
 Drain = 100 mr/hr.
 Wall by drain = 100 mr/hr.
 Gen. backgrd. = 25 mr/hr.

} what means + methods
should be used to
reduce these readings?

- ④ Ev. operations normal.

- ⑤ Tank farm operation abnormal.

(a) The manometer at the D.B. reads 11 all the time whether the bubbler is pressured or not.

(b) W1 + W2 were filling up fast at shift change. Data as follows:-

	W1	W2	So
Sampled 1:00 AM - Counts	354	3,272	
L.L. 1:00 AM -	3'5"	3'-4"	
L.L. 1:30 AM -	3'9"	3'7"	
L.L. 2:00 AM -	3'10"	3'9"	
L.L. 2:30 AM.	3'10"	3'9"	
L.L. 3:00 AM.	3'10"	3'9"	

- Called 105 to locate source of flow. They cut water flow at 115 Bldg. from $\pm 8 \text{ gal/min}$ to $\pm 2 \text{ gal/min}$. - At about 1:00 located a hose running water down drain at Cell 3 - 205 Bldg. - Cut flow off.

8/2/
8-4/
Scha

8/2/
4-1

So

8-3-5
8-4
Blood

8/2/50 ① Replaced tygon tubing at S.B. + D.B.

8-4 ② Made up a suction pack to clean P³² filters
Schaeich and replaced tygon drawoff line at Bagle.
Continued clean up work.

③ Electricians continued work on alarm system.

④ Shift attended safety movies.

⑤ Pipefitters started work on PB2 extension.

⑥ Painter put first coat on PB- 5, 6, + 7.

⑦ Palled 3rd extraction at Bagle and delivered E2 to H. Assel. E1 went to 204 Bldg. Started 4th extraction.

⑧ Continued evaporating.

⑨ Carpenters continued making form
for new cubicles.

⑩ Repaired sink drain at Bagle.

8/2/50

4-12. ① Completed Evaporation of Iodine Product Sacks solution, in Room 10. The stuff looks awfully crappy.

② Completed P³² Run at 204 Bldg and submitted samples to lab.

③ Continued evaporating on Tank Farm.

④ Worked with Rinsham's columns at 908 Bldg. Passed on the word to the 12-8 shift.

8-3-50 ① Ev. + Tank Farm operations normal.

8-4 ② Had Maint. start Whirly pump at W-7.
Blood. ③ Sketched Panel Boards #2 + 4A.

- ④ Checked Rimshaw's Columns at 908.
 Distilled Water rinse passed thru. #6 + #7
 and #3 is still in progress. (#3 distilled H₂O also)
- ⑤ Melted S at Cell 5 after Maint. repaired
 our oven. The electrical contacts were
 corroded and the oven failed to heat.
 This oven needs general overhaul in
 this respect in order to have max. efficiency.
- ⑥ Pumped out A Cell. - (Water 5 inches deep
 on floor cell.)
- ⑦ Decontaminated Two Maint. Trucks used in
 setting up Whirly pump #4 at W-7.
- ⑧ Boiled down P - at 204. - still is off +
 about 500 ml. to go!

8/3/50 D Prepared to plating equipment for pellet
 cleaning. Plastic beaker was replaced with
 Schott glass and the old beaker covered with Pb in
 corner of barricade.

- ② Painters continued work on Panel Boards.
- ③ Pipefitters continued work on new PB #3.
- ④ Carpenter & rigger prepared forms for muck.
- ⑤ Laborers continued work on 706-D drainage
 ditch.
- ⑥ Replaced emergency lanterns in D'bdg.
- ⑦ Placed clean papers around vacuum pumps.
- ⑧ Drained A cell with whirly.
- ⑨ Continued evaporation.
- ⑩ Loaned small fire hose to 105 bldg.
- ⑪ Electrician continued work on fan alarm system.

8/3/

4-1-

Sach

8-4-

8-12

Blo

8/4/

8-

Sach

- 8/3/50 ① Pumped out A cell with Whirly.
 4-12 ② Dumped two Flaggs of metal waste into W7.
 Sachs ③ Cleaned up decontamination room.
 ④ Filled two S cans at Cell II. That's all there is.
 ⑤ Cleaned up Bagle-Bagle.
 ⑥ Shift attended Safety movie.
 ⑦ Continued Evaporating on Tank Farm.

- 8-4-50 ① EV. + Tank Farm operations normal.
~~8-4-50~~ ② Safety Film was attend at Fire Hall.
 Blood ③ Cleaned up entrance to Cell A. Pumped out
 cell A.

- 8/4/50 ① continued work on drainage ditch behind 706-D.
 8-4 ② Painters continued work on 706-D PB's.
 Schenck ③ Pipefitters continued work on PB-3.
 with ④ carpenters placed forms for cubicle wall.
 in ⑤ Reinforced steel on 2nd floor level
 ⑥ made up 5% HCl for Co cleaning. ^(add 250 cu ft water) to make 10%
 ⑦ backfilled hole at W9.
 ⑧ brought down 32 - $\frac{1}{2}$ " Co needles from
 105. Cleaned approx. 15 and sent to
 902 bldg. The carrier is behind the faricals
 with approx. 17 needles. Methyl alcohol
 is sink crystalized.
 ⑨ tried decontaminating fluorothane caps for
 P-32 extractor, but little success. They are
 setting in acid solution in 706-D decon room.
 ⑩ Hellwrights installed counter balance
 lid removers at Bagle Bagle.

40

- ① Started both steam turbines and shut down electric fans so that electricians could install alarm system still running at shift change.
- ② Continued evaporating.
- ③ Millwrights installed ~~#~~ brackets for Blow tank on west wall of Cell A.

8/4/50

- 4-12 ① Toof Iodine Slug carrier to Pile Bldg. Sacks ② Continued Evaporating on tank farm.
- ③ Discovered that Power lines to South Catwalk on S.B. were cut and pump sampler was not running. Told extension cord from H.P. shackle switch box to H.P. air sampler unit on west side of S.B., ~~so~~ which put current in Catwalk line. Sampler back in operation at 9 p.m. No 7 p.m. S.B. composite was taken.
- ④ Coil N discharge line ruptured in Evaporator gallery. Shift pipefitter repaired.
- ⑤ Cleaned 17 1" x $\frac{1}{2}$ " Cobalt needles. They are in 902 Bldg carrier behind the barricade in 908 Bldg. These pellets came from breaker 12.
- ⑥ Power failure at 5:38 p.m. Plant wide. A Johnson Construction Co. crane was the culprit. Power back on at 5:42. Turned everything back on.

8-5-50

12-8 CONTINUED WITH RUN 546 AT THE EROP-

8-

8-5-

8-6-

72-

8-

8-6-5

8/7-

12-

SAC

8/7-

8-4-

SAC

8-5-50 8-4 H.B.

1. Continued evaporator.

8-5-50 4-12 GPP

Continued evaporator at Tank farm.

8-6-50

72-81-CONTINUED WITH RUN # 591 AT EV.

2. Replaced light bulbs at S8 & D.B. SAMD.
ie Boxes.

8-6-50 8-4 H.B.

1. Continued evaporator.

8-6-50 4-12 GPP

Shift Sup. took 6 pair of coverall to
105°

Continued Run 547 at EV.

8/7/50 D Relamped "D" Bldg.

12-8 ② Pickup lights are shorting out.

Schach ③ Continued evaporating.

④ Brought down pile until but 7th stages
& FI are not ready.

8/7/50

8-4 ① Painters continued work on 706 D Panel Boards.

Sachs ③ Fitted two inches out of W8 to W5.

③ The A20 condenser arrived and is now at
the shop having brackets fitted to it.

④ Pipe work on Blow-tanke was nearly completed.

⑤ Installation of Grates ~~on~~ ~~on~~ ~~on~~ ~~on~~ ~~on~~

West S.I.C. 2nd level, was begun.

- ⑥ Continued Evaporating on tank farm.
- ⑦ Work continued on piping to new P.B. #3.
- ⑧ The Cobalt Pig is at the Pile being loaded with the remaining Pellets from Bealeen #12.
- ⑨ Ramsay to Iodine all shift.

8-7-50 ① Cleaned up sink in 908 next to Co apparatus.

4-12 ② Pile operations couldn't get us any Co this Blood shift. They said 12-8 shift might be able to do so.

- ③ Ev. & Tank farm operations normal.
- ④ I^{131} readings to be taken on the hr. were recorded.
- ⑤ We attempted to clean up decontaminate the I^{131} product holder so that it could be taken to the shop for plating. - Did not succeed at first. All smears hot up to 4900 Counts/min. - Parts are now sparging in a soln. of Versene, Citric & Soap. in Rm-10 706-C. - This seems to have helped some.
- ⑥ Pumped out Coll A Sump.

8/8/50 ① Steam leak in low storage and two lights out on east side of "D" Bldg.

Seabird ② FI off gas failed at 12:15 AM. Turned on cooling water and drained off gas pot several times. Started back up at 12:30 AM.

- ③ Lights on big truck are shot.
- ④ Checked FI in C Bldg

8/8/

8-

Dec

8-8-

4-

Bloo

- ⑤ Decontaminated FI product holder to shop tolerance. It had to be dismantled to clean up hot spots. The parts are in 76-C Room 10.
- ⑥ Melted out 4 sulfur cans and started extractions at 6:15 AM.
- ⑦ Continued evaporating.

8/8/50

- 8-4 ① Cleared the remaining Cobalt pellets from Jack's Beaker #12. They are in the 902 Bldg cannister behind the bannister in 903 Bldg.
- ② Millwrights secured A20 condenser on Westside of Cell A.
- ③ Pipefitters installed inlet and outlet water lines to the A20 condenser. The discharge line from the jet to the top of A20 is being made up at 3:30 p.m. and will be in place by 4 p.m.
- ④ Painters continued work on 706D Panel Boards.
- ⑤ Pipefitters worked on P.B #3, 2nd level, piping.
- ⑥ Carpenters started putting wooden floor on top of steel grates, west of Cell on 2nd level.
- ⑦ Ran both steam turbines for four hours.
- ⑧ Continued Evaporating on tank farm.

- 8-8-50 ① Checked Rimshaw's columns
4-12 ② Cleaned up in front of Cell A. Pumped out Blood. Cell A Sump.
③ Took up P- at Bagle at 6:30 P.M. - Boiled down at 204 -
Started re-extractions at 6:45 P.M.

④ Ev. & Tank Farm operations normal. Took a sample of Ev. Sump. to see if some information on the nature of the "leak" into the sump could be obtained.

⑤ Tagged stainless steel drum near W-5 at Cement pad.

⑥ Joe Sutton held over all shift on I¹³¹ - boiling down in room 10 - There's some I¹³¹ to be transferred to room #10 from the still.

8/9/50 ① Three lights out at 900 area stack.

12-8 ② WC-1 will not sample jetted tank to W-5.

Schmid ③ Boiled down FT in Room 10.

④ Continued dimethyl columns.

⑤ Took up P32 extraction and started retraction. Boiling down at 204 at shift change.

⑥ Cleaned mud off R.P. weir gauge.

⑦ Maintenance replaced faulty nipples in front of coil & steam traps at TEV

⑧ Continued evaporating.

8/9/50

8-4 ① There is a scale in the bottom of the trap at Sachs the nozzle located there. Probably is the weld. This scale will be repaired in the near future.

② The new fence south of the road on the South tank farm has been torn down.

③ Painters continued work on 706D Panel Boards.

④ Pipework was continued on P.B #3, 3rd level.

8-9-

4-1

B100

- ⑤ Piping conn's on North End of PB#2 were connected.
- ⑥ The piping on A20 condenser is completed.
- ⑦ Headburners began placing lead at Crude Filter cubicles.
- ⑧ Carpenters finished 2nd level floor job, West. of Cell A.
- ⑨ Continued Evaporating on tank farm.
- ⑩ Delivered last of cleaned Pellets from Beaker #12 to 902 Bldg., brought down all of Beaker #11 and put it behind 908 Barricade.

8-9-50 ①. Note: - H.P. checked carrier pots #95, #104 & #105.
 4-12 in 912 packing area. :- (Pot #100 - smear
 Blood #4 is over tolerance.) Packing area
 requested this service for information
 at 8:00 AM.

- ②. Took up P-product at 204 - 3.5 to 3.0 r/hr.
 Crude evaporator at 204 has some of the extractions of E₁ & E₂ to be boiled down.
 Started re-extractions at 7:30 P.M.
- ③. The Co. carrier for 902 has been unloaded and is at the entrance of 912. We did not have time for Co..
- ④. Ev. & Tank farm operations normal.
- ⑤. PICKLED 9 S-Cans - 3 dried
 6 drying in ovens at Cell 5
 (ovens off)
- ⑥. Cleaned up. Be Truck from Y-12 as per instructions by Mr. Blauer.

- ⑥ I^{131} is dissolving at 706-C. - readings on the half hour.
 ⑦ Pumped out Cell A sump.

8/10/50 ⑧ Checked FI dissolving in 706-C.

8-10

12-8 ⑨ Boiled P^{32} extracts at 204 Bldg.

4-

Schmid ⑩ Started cooling E1 & E2 4th extraction at 7:30 AM.

B100

⑪ Cleaned all Co pellets from Beaker #11 and delivered to 902 Bldg. The Co carrier is behind barricade in 908. It is empty.

⑫ Made ^{outdoor} light inspection of 900 area.

⑬ Pickled, rinsed, dried, and numbered 18 sulfur cans at Cell V.

⑭ Continued evaporating.

8/10/50

8-4 ① Instrument man removed AG ring balance to Sacks Instrument shop for repairs.

② Painters continued work on 706D Panel Boards.

③ Headburners worked on Crude and Process Filter cabinets.

④ Pipe work was continued on P.B.#3 3rd level and on North End of P.B.#2.

⑤ Continued Evaporating on tank farm.

⑥ The Cobalt pig behind 908 Barricade contains

two pieces from Beaker 2 ready to be plated. The electric truck trailer down and no Cobalt was cleaned on this shift.

⑦ Maintenance continued work on S. Tank farm ditch
 ⑧ Maintenance started digging around settling basin

for outlet collection pipe.

G. J. A. Jones started excavating in S. tank farm
for metal recovery building.

8-10-50 ① Took Care of Rimshaw's #7 Column.

4-12 ② EV + Tank Farm operations normal.

Blood ③ Wm Campbell finished distillation of I¹³¹.
- about 9 liters left to boil down.

④ Pickled 24 S-Cans and left them to
dry in 902 decontamination room oven.

⑤ Cleaned 1 pellet + some pieces of unknown
material from beaker #2. - Found 3
other cleaned needles on paper on barricade
floor. - Put them all in one carrier for
902 + delivered to 902. Considerable difficulty
was encountered with the 908 Carrier being
Contaminated. - bottom of cover read
10 R/hr. - Carrier was also contaminated.

- Couldn't decontaminate the 908 Cover
although we tried and use up exposure
time. Decided to leave cover outside
908 while we worked and then, took
~~Carrier~~^{Carrier} up to the pile for a load from
beaker #3. - 908 Carrier is loaded with 1
pellet from beaker #3 and is behind
barricade along with an empty 912 Carrier.
(Beaker #3 had only 1 pellet in it.)

8/11/50 ① Cleaned 1 - 1cm Co pellet from Beaker #3.
12-8 It is in 902 carrier behind barrier in 908
Schaich Bldg. Reason - it reads 18 at 2 ft from carrier.

② Finished work on 706-D charts.

③ Took all sulfur cans from 902 to Cell II and
littered.

④ Boiled down FI in Ban 10.

⑤ Continued evaporating.

⑥ Tried to fill sulfur cans but all attempts lead to
burning sulfur.

8/11/50

8-4 ① Millwrights mounted A19 condenser.

Sachs ② Continued Evaporating on Paste Tamm.

③ Pipework on P.B. #3 was continued. Moore
transmission system lab. mechanism, ^{for A17} was installed
on 2nd level, West of Cell A.

④ Headburners continued work on Crude and Process
filter cubicles.

⑤ Dumped 40 liters of waste from semi-wastes into
W7.

⑥ Cleaned Co needles from Beaker #1 and took
to 902 Bldg. The cleaning beaker fell out of the
supporting arms during rotation. It is on top
of the lead shield behind 908 Ban. If 4-12 can
get the apparatus back in Operation, Beaker #4 is
next one to be cleaned.

⑦ ~~██████████~~

8-11

4-

Blo

8

8/12

4-

8-

8/13

8-4

9/8

5/14

12

Sac

- 8-11-50 ① Finished the work on Rimshaw's Column
 4-12 at 908.
 Blood. ② Repaired the Co beaker holder and replaced
 beaker - ready for operations.
 ③ Started melting S again at Cell S. - Filled
 4 cans. -(Turned off ovens.)
 ④ Clean up in front of cell A - pumped out
 Cell A Sump.
 ⑤ Ex. & Tank Farm operations normal.

8-12-50 12-8 N.B.

1. Continued evaporator operations.

1. Continued with Tank Farm Evap.

2. Had mine. to check north still 706-0 812a.

8/12/50

- 4-12 1. Continued tank farm evaporator.

8-13-50 12-8 N.B.

1. Continued evaporator operations.

8/13/50

- 8-4 + 4-12 1. Continued evaporation on tank farm
 O.B.O. Started run # 554 8:50 A.M. ~~8:50 A.M.~~

5/14/50 ① Took Toluene slug canister to Pile Bldg.

12-8 ② Brought Pile Units to 902 Bldg.

Eachs ③ Continued Evaporating on tank farm.

- 8-14-50 ①. Ev. & Tank Farm operations normal.
- 8-4 ②. Lead burners still working on cobicles on Blood. 1st & 2nd level at 706-D.
- ③. Pipe fitters hooked up A-2nd Condenser in Cell A. Work also continued on P.B. #3 & P.B. #2
- ④. The Cottrell Precipitator was connected to the system (Hot Off-Gas) and is still being checked & tested. As it stands now, the off-gas goes thru the precipitator and filter box. 8/15
- ⑤. Washed down 900 stack area.
- ⑥. Excavating for the metal recovery bldg. on S. Tank Farm continued.
- ⑦. Work on the Settling basin collection pipe is still in progress.
- ⑧. WC-1 sampler does not sample. 8-15
- ⑨. Co. Carrier of 908 is being used at 909 for a few days. 8-9
Blo
- ⑩. A receptacle in 908 on circuit #13 needs repair. (It has been reported 8-11-50 - 4-8 shift)

8/14/50 ① Schallert left a carrier in 903 sink to be decontaminated on days. Made partial dec. Schallert and left water running in it.

- ② Maples helped Schallert remove product from 706-C to 910 Bldg.
- ③ Checked FI dissolving in 706-C
- ④ Finished work on Rimshaw's column.
- ⑤ Filled 4 sulfur cans. There is no more sulfur at Cell V or Chem. stores.
- ⑥ Continued evaporating.

- ⑦ FI off gas vent. Report at 10:30. Shut down drained line good and started up at 11 PM.
 ⑧ Walked cleaned and scrubbed Cell V. Moved all trash to 706-D platform.

8/15/50

- Ked
s
S.
e
- 12-8 ① Took hourly readings on Iodine dissolving. Had no trouble with off-gas.
 ② Melted out 4 cans of Sulfur and started extractions at Bagle. F1 on at 4:10 a.m., F2 at 6:30 a.m. The last can is still in the heater.
 ③ Continued evaporating at Tank Farm.
 ④ Pumped out Cell A with the Whirly.

8-15-50 ① Pipe fitters installed jet to A-19. Continued work
8-4 on #3 panel board.

Blood ② Work continued on lead Cabicles on 1st & 2nd level. Electrical conduit work continued in 706-D.
ds shift) ③ Ev. operations normal. Repaired lead shield at Ev. sampler.

- some ④ Maint. work continued at W-7 - J.A. Jones
Continued work on steam lines at the tank farm.
 ⑤ Steam leak on main steam line to large steam turbine was repaired - Replaced packing in the valve.
 ⑥ Excavating on S. tank farm continued.
 ⑦ Work at S.B. continued.
 ⑧ Ran steam turbines 4 hrs.
 ⑨ Extractions at Bagle in progress!
 ⑩ The "Garden" is being fenced! (706-D)

8/15/50 ① Electrician received receptacle on West barrier
4-12 in 908 Bldg.

Schaeck ② Cleaned all jellies in Beaker #4 and delivered to 902. They look like they are copper plated.

③ Schaefer reported for work.

④ Finished column work for Rimshaw.

⑤ Filled 1st extractions at Eagle and started second extractions at 5:30 PM. Boiled down crude at 204 Bldg.

⑥ Carrier is in 903 Bldg sink reading up to 102/hr. Tried soap-citric and HNO₃ wash but didn't seem to touch it. Ran out of exposure time at this point. Why in the hell can't Beauchamp send back a clean pig. That's the way he gets it.

⑦ Operated electric lift truck for Schallert.

⑧ Cleaned and filled distilled water jugs.

⑨ Filled 3 sulfur cans at Coll T.

⑩ Continued evaporating.

⑪ Cleaned up 918 Bldg.

8/16/50

12-8 ① Took up two 2nd extractions at Eagle Socs and boiled down at 204. The female joint on the sampling flask break off line was broken off by accident. Reconstructed.

② Filled some Sulfur cans. Can #586 is filled but the threads are stripped on it. The cap won't come off or tighten up.

8-16-

8-

Blo

3. Continued evaporation on tank farm.
- ④ The time marker on P² was sheet that steam was turned on E2 and extraction should read 4:20 am instead of 5:20 am.

- 8-16-58 ①. A cyclone fence was started around the
8-4 900 stack area today!
- ②. Excavation continued on the south T.F. for Metal Recovery Bdg.
- ③. Work at S.B. Continued.
- ④. Maint. installed (456 - 457 - 458 Connected) stand-pipe to W12 line in Cell A.
- ⑤. E.V. was shut down at Noon for repairs.
— Pin replaced in EV-W6B valve.
— E.V. Sump jet was unplugged.
— E.V. Tank was welded hoping to stop leak.
— Leak in steam jet line for soln. addition to E.V. Feed tank etc. was welded.
- ⑥. W-2 valve was checked - Removal of valve was cure suggested by Maint., however as long as it will operate they will not remove it.
- ⑦. Took 3rd extract op at Bagle. — E-2 went to Mr. Russell. — E1 ~~is~~ still in flask at Bagle. E1 was leaking. — It was cooled and ready to start again after adjusting lid. Re-extraction in E2 started OK.
- ⑧. Still working on Crud filter + process filter in 706-D.

8/16/50 ① Maintenance made up three gaskets for Beagle
4-12 extractors.

Schaeck ② Did not get a good check on EV pump leak
as yet. Still have to jet pump.

③ EV L.L. control pen is off. Has to be set 2"
above L.L.

④ Cleaned Co pellets from beaker #13 and delivered
to 902. They are gold plated.

⑤ Took extract to 204 and boiled down.

⑥ Finished work on Rimshain's column.

⑦ Finished boiling down F.I. in Run 10.

⑧ Checked & marked new lines on PB-2+3

that were connected up. High press. air line
#436 and A17 vac #403 on PB-3 are
connected in reverse at B2 plug. A19
condenser water lines #444 + #449 are connected
in reverse at plug C5.

⑨ Added two bottles 70% HNO₃ to S.S. down at
W.S.

⑩ Finished taking up P³² product and submitted
samples to lab.

⑪ Filled 2½ sulfur cans at Cell I.T.

⑫ Pumped out Cell H pump.

8/17/50 ① Pulled 4th extraction at Beagle and boiled
12-8 down at 204 Bldg.

Schaeck ② 706-D Vac. pumps leaking quite a bit of oil.

③ Filled 3 sulfur cans

④ Continued evaporating.

8-17

8-4

B100

⑤ Sump at EV is still leaking.

- 8-17-50 ① A-19 Condenser Water lines were marked
 8-4 incorrectly but hooked up OK. - Changed tags.
 "2" Blood. - High Press air line #413 + A17 Vac. line #436
 lined were connected properly. Work continued
 on the Crud filter & Process filter - All lines
 to P.B. #3 were checked for leaks today. -
 Some leaks were found and most of them
 repaired.
- ② Excavating in S. Tank Farm Continued.
- ③ Work on the S.B. Continued.
- ④ Ev. & Tank Farm operations ~~were~~ normal.
- ⑤ Jet to W-9 from waste tank at 706-C
 was plugged. - Jet was opened up. & jetting
 is in progress.
- ⑥ Received 57 Sampling Cones from the glass
 ship. - Stored them in the Cabinet on 2nd
 level - 706-D
- ⑦ A-6 ring balance was installed but not
 check. A1 ring balance (706-D) was installed
 and checking has not been finished yet.
- ⑧ Steam leak on E2 at Bagle was repaired.
- ⑨ Did some decontamination work at W-7
 for Maint.
- ⑩ Vacuum pumps on 2nd level 706-C were
 repacked.
- ⑪ 902 Cobalt Carrier was placed behind 908
 barricade. (It is empty). Couldn't get any

Cobalt at 105 today.

8/17/50 ① Finished work on Rinckow's column.

4-12 ② Finished work on Russell "

Schaich ③ Clean Co pellet from Beaker #8 and delivered to 902. It is hot!

④ Filled 5½" sulfur cans.

⑤ Continued evaporating.

8/18/50

12-8 ① Tilled six and one half cans at Cell D. Tieled Sacks up some more SulFun at Chem Stones.

② Brought 20 $\frac{1}{8}$ " x 3" Cobalt needles from Beaker #70 to 902 Bldg and cleaned. These needles will not fit in the 902 Bldg Cobalt cup. Put them back in the pig can and deposited at door of 902 Bldg.

③ Continued Evaporating at Tank Farm.

8/18/50
4-12

8-18-50 ① Checked both addition lines from Al Funnels to

8-4 Al for leaks.

8-18-50 ② Checked steam jet line to Al + Al jet discharge to W12 for leaks

③ Worked on Crud Filters & process filters. Also started checking Crud filters for leaks with results P? —

④ Still calibrating Al Ring Balance & working on A6-ring balance.

⑤ Excavations on S. Tank Farm Continued.

⑥ Work at S.B. Continued. - forms for Collection box being worked on.

- ⑦ Ev. & Tank Farm operations normal.
- ⑧ W9 - steam jet was again treated with HNO_3 with good results, however the cement pit is still hot - 75 R/hr. - Contamination appears to be on the side walls after filling pit with water up to the jet. Steam was passed thru the jet to W-9 for 2½ hrs. without reducing radiation hazard. Valve between A6 & W-9 is still closed!
- ⑨ 908 Cs Carrier is empty and placed outside 908 Bldg.
- ⑩ Maint. sheeted up walls of 706-D.

- 8/18/50
- ① Cleaned rest of gullets from Breaker #10 and 4-12 delivered to 902. There is one small gullet in the pig.
 - ② Checked Kimshaw's column & cut off at 12 PM.
 - ③ Filled 2½ sulfur cans. No more sulfur at stores.
 - ④ DB boy sampler motor on the blink cleaned, smeared, and sent to shop. Took dip sample at 11 PM.
 - ⑤ Continued evaporating.
 - ⑥ Took FI carrier to 105 Bldg.
 - ⑦ Cleaned up in front of Cell H and emptied pumps.
 - ⑧ Maintenance repaired DB sampler but it is noisy and may cause trouble. Back in operation at shift change.

58

8-19-50 Contaminated EV on tank farm.
12-8 SPP Maint is working on DB Pump.

8-19-50 8-4

Automatic sampler is back in operation
at the DB.

A steam shut down at 3:PM to repair
leaks. Steam is still off at 3:50PM

8-19-50

4-12 1- STEAM BACK ON AT 4:00 PM, STARTED UP
RUN AT EXPONATOR.

8-20-50 Contaminated EV at tank farm.

12-8

8-20-50 8-4

Maint replaced a burned out rheostat
in the 900 area alarm system 125 H.P. Blower

8-20-50 1-DUMPED RUN # 560 AND STARTED 561 AT
4-12 THE EV.

2- I HAVEN'T SEEN THE TIME CARD BOOK ALL WEEK
END.

8-21-50 ①. Ex. & T.F. operations normal.

12-8 ②. Brought down I¹³¹ slugs from 105.

B100d ③ K⁴⁰Pile units from 105 were delivered to 902.

④ There is steam leak in the steam line to the
sparger of the mixing tank at W1 & W2; Also
a valve packing leak near it.

8/21
4-

Sach

- ⑤ It seems that the pick-up truck should be checked for a grease seal failure on the left rear wheel.
- ⑥ Lights have failed at the 125 H.P. & 75 H.P. blowers in the 900 stack area.

hour 8/21/50 ① Started W8-W5 jet. It is to go till it blows.
 8-4 ② Started work on jet W of 706-C
 Schmid ③ continued work at W7 and new bldg
 on T.F.

- ④ Replaced tygon on S.B. sampler.
- ⑤ Instruments continued work on A1 & A6.
- ⑥ Maintenance continued work on process and cool filters. Cool filters all okay.
- ⑦ Instruments took A5 ring balance & A1 vac. ring balance to shops. A1 h.h. is okay.
- ⑧ Paid cement pads for S.B. until job.
- ⑨ Shift had blood counts taken.
- ⑩ Filled 2 sulfur cans at Cell IV.
- ⑪ Continued evaporating.
- ⑫ Checked A6 addition line & A6-wr line for leaks. Both okay.

8/21/50 4-12 ① Filled five sulfur cans at Cell IV. That's socks the end of them.

- ② Check Iodine dissolving in "C" Bldg.
- ③ Instrument man unplugged Trap h.h. indicator.
- ④ Continued getting from W8-W5.

⑤ Continued evaporating. The feed is beginning to look awfully rough. Blauer wants steam pressure cut back if things get too rough out there.

⑥ Checked P⁵² equipment in 906 Bldg For Cane hams.

8-22-50 ① Checked T¹³¹.

12-8 ② Picked up 4 cans S - and melted them out Blood Started E1 at 4:45 AM + E2 at 7:15 AM.

③ W8 getting to W-5. This shift no trouble was experienced with evaporator operating at 45# steam - (no plugging yet?). - Sp.g. 1.39. Second batch being dumped at shift change.

④ Had 900 stack area re-lamped.

8/22/50 ① Scrubbed up Eagle + replenished distilled H₂O.

8-4 ② Instruments continued work on ring balances.

Schaech ③ Lead burners continued work on CT + PF.

④ Laborers continued work at W7 and S.B. outlet.

⑤ Continued getting W8 to W5

⑥ Ran steam turbines for 4 hours.

⑦ Repaired rear wheel grease seal on pickup.

⑧ Cleaned up hot ground at Eagle.

⑨ Lead burners brought lead jig for sulfur cans.

⑩ Instruments rodded A6 tank and found chart to be off by 11". A new calibration will have to be made.

⑪ Photographers ~~were~~ took pictures of cell A and filters.

⑫ Checked A19 + A20 cond. water and found

8/22
4-1:
Sach

several leaks. Will repair tomorrow.

- ⑬ Started to clean pellets from Beaker #6 but 616 Bldg had moved them to other leakers. No more cleaning until further notice. Carrier at 908.
- ⑭ Continued evaporating.
- ⑮ Brought glasses & overshoes from stores.
- ⑯ Poured cement forms for new Bldg on TT.

out 8/22/50

4-12 ① Dalled Extractions at Bagle-Bagle at 5:30 p.m.

Sachs The stuff is in the flask at Bagle-Bagle. No manpower or exposure time to take cruise to 204 for evaporation.

- ② Continued Iodine Run at Cell and Product Evaporation in Room 10. Finished distilling. Boiling down in Room 10.
- ③ Continued Evaporating via Tantalum.
- ④ Took Iodine Stagg carrier to Pile Bldg.
- ⑤ Checked A20 and A19 inlet and outlet water. Both condensers are leaking badly at both bushings. All other parts of line are O.K. Couldn't check P.F. - A8 jet and RCOG - A20 jet. There are two open lines off the Panel Board 2 High Pressure steam header.
- ⑥ Cleaned contents of Beaker #15. About 24 Pellets in all. They are in the doorway of 902 Bldg. Carrier reading 4R at contact.
- ⑦ P.F. & C.F. Cubicles on 2nd & 1st levels resp. have about 1" of HNO₃ on stainless steel floor. Tagged each Cubicle.

- 8-23-50 ① I^{131} boiling down all shift. - Shut off at shift ^{change} \$0
 12-8 ② Took up P^{32} 1st extract - boiled it down.
 Blood Took up P^{32} 2nd extract - boiling down.
 Started 3rd extraction at Bagle at. -
 ③ Maint. repaired steam leaks at mixing tanks in N. Tank Farm. - A new steam trap, valve + nipple were installed.
 ④ Still jetting W-8 \rightarrow W-5.
 ⑤ Delivered I^{131} slugs to 706-C
 ⑥ Evaporator status:
 (a) Valve ~~W-6A~~ EV. - W6A is very difficult to turn.
 (b) LL. lines to Ex. plugged after run #567.
 Maint. unplugged lines with steam.
 (c) Sp.G. of Ex. Liquid appears to be off .03
 - Ex Sp.G. - 1.17 lab. Sp.G. - 1.13
 (d) LL. Control does not control.
 LL = 37"
 Control = 35"

8/23/
 4-12
 Sochi

- 8/23/50 ① Jetted acid out of C.F. & P.F. sumps and
 8-4 checked lines. All lines okay.
 Schach ② loaded FI slugs.
 ③ continued work on TF, W of 706-C, and so.
 ④ Jaggers started work on TF steam lines. Tolson
 started grading W13, 14, + 15.
 ⑤ W8 to W5 jet going all shift.
 ⑥ Instruments tested EV instruments.
 ⑦ A17 funnel installed on 3rd level.
 ⑧ Plugged off open lines at PB-2. (Lowrie + H.P. team)
 ⑨ Lead burners continued work on C.F. + P.F.

change.
to
cubicles.

- ⑩ Started calibration of A6 tank.
- ⑪ Installed new automatic sampler at R.P.
- ⑫ Burned out weeds at R.P.
- ⑬ Took up 3rd extraction at Bagz and delivered to 204 rdg. Started 4th extraction.
- ⑭ Turned concrete for column cubicles.
- ⑮ Capped flow tank square lines. B.T. has 5 gal. in it.
- ⑯ All lines from PB-3 to outside of Cell A okay.
- ⑰ Pipefitters tied in RCOG-A20 lines at PB-2.
- ⑱ " worked on condenser leaks. A-20 inlet & A14 outlet, + A18 outlet water still leak at bushing, steam side of A17-A18 jet leaks at wall.
- ⑲ Labourers started digging for steam leak at W13.
- ⑳ Continued evaporating.

8/23/50

- 4-12 ① Then W8 → W5 jet quit at 5:50 p.m. Steamed back out line and started W6-W8 jet at 6:15 p.m. It is to go until it quit. W8 level was 4' 4" when W8 → W5 jet quit.
- ② Checked Iodine dissolving in "C" 31 days.
 - ③ Continued P³² run at 204. Ramsay will stay over on 12-8 to finish up run.
 - ④ Checked following lines in Cell A. RCOG-A20 jet, P.F. to A8 jet, A17 - A9 jet, A17 - A8 jet. Found four leaves and tagged same. Leaves as follows:
 - ⑤ At plug 52 out. 1/2 in. off Cell wall.
 - ⑥ On A17-A9 jet steam line (427) at wall L 2"

From inside of cell wall.

- ③ At inlet side of RCOO-A20 jet
- ④ At P.B #2 unions on P.F. → A8 jet. Between valve and pigtail and header and valve.
No other cake spotted.
- ⑤ According to the writing on back of P.V. gauges on P.B #3, the A17 → A8 jet should be the A17 - A9 jet and visa-versa. Believe they are just backwards.
- ⑥ Continued evaporating on tank farm.
- ⑦ The Evap-W6A valve pin is gone! The valve is open.
- ⑧ ~~R&B~~ Cleared Co Pellets from Beaker #13. There were fifteen pieces, not seven. The clean pellets are in the 902 doorway.
- ⑨

8-24-50 ① Checked I^{31} (dissolving).

- 12-8 ② Took up extraction #4 at Bagle. - Boiled down.
Blood Took up P^{32} product and delivered to 902. (3R/hr)
- ③ checked A19 + A20. condenser for water leaks
A-19 - Leaks at the outlet fitting (Top)
A-20 - Leak at the inlet fitting (Bottom).

④ Evaporator Status:

- W6A valve pin was known to be sheared off.
- W6B valve pin was found to be sheared off when we started another run at 12 mid-night.
- Shut down Ev. - got H.P. to check the pit.
Floor 3R/hr. - other points up to 10R/hr.
- Used Citric acid and water wash twice.
Floor 1R/hr. + - other EFT - at bottom 4R/hr.

working area near valves now 2.2 R/hr.

EFT has 50" of water in it. Washed out
W6A EV. (W6A + W6B open.)

— Maint. used up their working time (2 men)
still down at shift change.

②

8/24/50 ① Continued work at S.B. outlet, 706-C pit, W13
8-4 Steam supply pit, and new economy bldg.
Schisch ② Maintenance repaired EV-W6A + EV-W6B
valves.

③ Jetted W6-W8 all shift.

④ Tagged control line at EV and continued
work on TF.

⑤ Lead burners continued work on CF + PF cubicle.

⑥ Closed damper between steam turbine and
900 area stack for millwrights. See ①

⑦ Pipefitters continued work on A18, A19, & A20
condensers. Repaired all tanks outside of all
inside leaks same as yesterday. Back welding bushing
on all condensers.

⑧ Continued evaporating. Draining at shift change.

⑨ Large truck is at garage until tomorrow.

⑩ Finished adjusting A6 ring balance and
started calibration.

⑪ Opened damper on steam turbine and started up.
Shut down 75 H.P. and closed dampers in front and
above fan. Steam turbine to run all night.

⑫ Repaired leak on process filter manifold.

8-24-50 ① The new hot off gas precipitator went on the 4-12 block at 9:50 p.m. Shut down as prescribed. Sacks when alarm bell began to ring.

② Attended to Schallert's column in 908 Bldg.

There was no sign of any peak of activity during the entire shift. Passed the word to the 12-8.

③ Continued Calibration of A6. Started on 2nd Chart is on table in front of ring balance. 400 lbs at a time. Blauer wants to know at what level the tank overflows.

④ Sampled W6 and W8 and had lab men for Sp. G.

⑤ Continued jetting from W6 to W8.

⑥ Continued Iodine run at 706c Bldg. Work in the Cell is complete. Still evaporating crude Product in Room #10.

⑦ Better have maintenance check the inside bearing on the steam turbine. It's running pretty hot.

⑧ ~~Pile~~ Cleaned Co Pellets from Beaker #15 (about 80 of them). Also added a 3" x $\frac{1}{8}$ " pellet that we found in barricade. They are at 902

⑨ Checked A1 jacket and A1-W12 jet. No leaks.

⑩ Pile Bldg. says there are no pellets of any description in Beaker #13.

8-25-50 ① Buried down I¹³¹ in Rm. 10.

12-8 ② Checked Schallert's Column at 908. (No activity)

Blood ③ W6 - W8 jet still jetting.

Sp.G. W6 = 1.245 Sp.G. W8 = 1.234 (sampled at 5:30 P.M.)

8/2

8-

Blau

④ Ev. operates up to Sp. G. 1.3 at 40# steam - Then foams - Started boiling down at 30# steam.

Foam-overs are getting more frequent!

⑤ Jetted Al empty. - Checked as follows:-

A1 - A11 - OK no leaks

A1 - A9A - OK no leaks

A11 - A1 - Leak at top of steam pot } Tagged.
- Leak at union near jet.

A1 - Steam Sparger } Low press. steam off at
A1 - Jacket Steam } low storage - did not turn on (?)
- therefore did not check.

JAI - A11B - Did not check.

Filled Al with water, - at 7:30 AM. (Does not show on Inv)

⑥ Finished second calibration of A6. checked over flow point. See data.

8/25/20 ① Maint. finished back welding all bushings
on the condensers. Tested them all with Blauer full line water pressure & installed them in the cell.

② Maint. replaced line A1 - A11B from panel board to the cell wall.

③ Calibrated A6 for the 3rd time

④ Instrument dept worked on calibration of A1 pressure - vacuum ring balance. It is now in service.

⑤ Maint. continued work on jet Duct of 706-C.

⑥ Repaired make-up room sump jet

⑦ Process filter manifold had to be taken out again.

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- ⑧ Jetted W₁₄ to W₅
⑨ Lead burners continued work on process
filter & lead filter cubicles.
⑩ Electricians still connecting services
under balcony on 1st level.

8/25/50

- 4-12 ① Took Toluine slug carrier to Pile Bldg.
Sachs ② Cleaned up around Cell A door and vacuum
pumps over hot lots

③ Continued evaporating on tank Farm. The
thing is getting worse to handle all the time.
Suggest that Ray Norton call Blauer tomorrow
for some sort of ~~operating~~ change in operating
procedure. We sure as hell need it!

- ④ The W₆-W₈ jet quit at about 9:30 p.m.
W₆ level is about a foot higher than anticipated.
Tried to get it started again with no success. Left
transfer line valves open. Maybe Chief Operations
can give it a few more tries over the weekend.
⑤ Cleaned Cobalt from Beaker #13 and
stored in 902 Bldg.

8-26-50 12-8

Chief ⑥ W₆ to W₈ jet again with
no success, so steamed line and closed
valves.

8-26-50 Continued with Tank Farm Ev. DUMPED
8-4 RUN 580 AND STOPPED 581

8-26-50 4-12 JFB.

ess
1. Continued evaporator. Dumped run 581 and 582, and started run 583 just before shift change.

2. Pumped Cell A sump couple of times.

8-27-50 12-8

8-27-50 4-12 - JFB.

1. Continued evaporator. Started run 586 and dumped it and started run 587.

2. Pumped Cell A sump.

8/28/50 Q How about pumping activity results on the TF log sheet
12-8 up to date?!

Schaefer, ② tried getting from W6 to W8. No luck.

③ Wiped up in front of Cell A and pumped out tanks.

④ Finished A6 calibration charts. Started on A9.

⑤ Continued evaporating but it was rough.

⑥ F. Schaefer still out.

⑦ Brought down Pd₄ units. No FI slugs yet.

8/28/50

8-4 ① Continued Evaporating on tank farm.

Sachs ② Checked A16 for leaks. Found one and tagged one leaking well.

③ Relocated steam line to A8-A5 jet.

④ Some pipe bracing was done inside cell.

⑤ Leaking well on discharge side of A18 was repaired.

6. Headburners continued work on crud and process filter cubicles.

⑦ Millwrights tore down big steam turbine bearings for repair. Back together but not right.

⑧ Work continued on drainage ditch behind 706C and 706D Bldgs.

⑨ Plasmag to Isoline all shift -

⑩ Fired up W14 tank to W5 and helped C Rankin with a ~~W16~~ W13 → 706C Bldg transfer.

8-28-50 ①. Ex. operations fair. No trouble this shift.

4-12 ②. I¹³¹ dissolving in progress. OK now. -(At 9:00 P.M. Blood the off-gas failed. - obtained vacuum again and proceeded with operations.)

③. Pumped out Cell A Sump & cleaned up front of Cell A.

④. Checked A18, A19 + A20 Condensers for water leaks.

A19 + A20 - OK.

A18 - has leak at inlet side pipe weld. - Tagged.

⑤. A Horn sounded on the 75 H.P. off-gas motor.

Checked for difficulty but found none - Turned off this particular signal device & let it run.

8/29/50 ① Checked FI dissolving in 706-C.

12-8 ② Melted out four cans of sulfur and started Sulfur last extractor at 5 A.M.

③ The Pb pig at Bagle is not large enough to hold cans melted by the Oils. Also when mount is cut off, molten sulfur forms a shell on side of meltier instead of flowing into tube.

④ Continued evaporating.

8/29

8-
Saa

8/29/50 ① Welders repaired leaks in Cell A. Checked A18
8-4 inlet and outlet water, A17-A16 jet, A17-A9 jet,
Sachs A17-A8 jet. Found a leak on the inlet side of the
A17-A9 jet. Will have it tomorrow. No other
leaks spotted. The A11-A1 steam jet leak will be
fixed tomorrow.

② Maintenance continued lagging of South Tank
steam lines.

③ Worker continued in new Pit west of 706 C
Bldg.

④ Had instrument men check temperatures of W6
and W8 solutions.

W6 - 111.5°F

W8 - 127.0°F

⑤ Maintenance repaired WC-1 sampler.

⑥ Pressure test lines in Process Filter cubicle. They
were OK.

⑦ Leadburners continued work on Process and Crude
Filter cubicles.

⑧ Instrument men worked on A5 Ring-balance.
Not working properly yet.

⑨ Maintenance worked on bearings on big turbine.
Shimmed up the North bearing. Now running with
load. Shut down 475 H.P. blower for this test run
of the turbine.

⑩ Continued evaporating on Tank Farm.

⑪ Repaired WC-1 sampling jet.

- 8-29-50 ① There is a small leak in the A18 water inlet
 4-12-Blood line outside Cell A at C-1 - Tagged.
- ② There seems to be a leak in A9 Tank at the over-flow line weld. This is not tagged but may deserve some attention. (A9 L.L. = 67")
- ③ Boiled down P³² at 204.
- ④ Finished distilling I¹³¹. Continued boiling down in Rm 10. There is still some distillate to be transferred to Rm 10.
- ⑤ Ev. Operations - a little rough. (1.4-1). Operations otherwise OK.
- ⑥ Watched Pressley's column at 908 Bldg. (See note on ~~the~~^{Instruct-} 108)
- ⑦ Turned off steam turbine at 5:00 P.M. Seems to be in good operating order. - Bearings cool. The relay on the 75 H.P. Motor still signals without cause. Why? Continued operating 75 H.P. Motor without signal device.

- 8/30/50 ① Pumped out Cell A pump after the rains came.
 12-8 ② Something is leaking into W.H. Possibly drainage ditch from the mornings?!
- ③ Boiled down FI all shift.
- ④ Took up 2nd extraction at single & started 3rd. Boiled crude down at 204 Bldg.
- ⑤ Continued Pressley's column. Took one hot cut and started 2nd at 7A.M.
- ⑥ Continued evaporating in our spare time.
- ⑦ R.P. top (sampler) got caught in the flood. No damage done.

8/30

8-4

Seal

- 8/30/50
- ① Checked A17 vacuum with A17-A16 jet. With steam jet at full line pressure, gauge ^{P.U.} showed 18.5" of Hg. Sacks with gauge at 80#, P.V. gauge showed 20.0" of Hg.
 - ② Repaired A18 condenser water leak at C1 Plug.
 - ③ Found leak in Process Filter cubicle on P.F. to Column Cubicle line. Welder has been trying to repair same all day w.t.i.s no success.
 - ④ Instrument man worked on A5 ringbalance all shift. The Sp.C is O.K. The h.b. has not yet been checked.
 - ⑤ Continued evaporating on tank farm. Found that water washes were giving a 1.1 Sp.C. Cleaned out evaporator thoroughly and proceeded with operation.
 - ⑥ Millwrights checked 45 H.P. Blower bearings. Test ran the big turbine for four hours. The bearings seem to be O.K. now.
 - ⑦ Headliners continued work on Process and Cined Filters.
 - ⑧ Workers continued on drainage line and collection box behind Y06D Bldg.
 - ⑨ Ramsey to Iodine all shift.
 - ⑩ Bracket holes for Process Filter mono-wit chain hoist were drilled in Cell A wall.
 - ⑪ We now have the A3-A5 and A3-W12 jets back in service. This is a temporary arrangement located on 1st level at AE close to B20 glassware cubicle. Signs to identify these jets will be put in place tomorrow.

8-30-50 ① Ev. Operations Continued. - Installed pump
4-12 Blood at R.T. Pond.

② Watched Pressley's Column at 908 as per
request by Mr. Pressley. - No activity yet. He
said to ^{collect} sample product at all definite
peak rises.

③ Jetted out pit in 906-D Bldg. Jetted Cell A
Sump.

④ Took up P_{32} - 1200 Mr/hr.

⑤ Took up P_{32} Extract at Bagle. E1 Extract was
O.K. E2 Extract was left in tube because
when it was opened up, the tube did not
have a cover on it. The extract of E2
looks rusty and decided not to mix it with
the other. Took the extract of E1 up to 204.

8/31/50 ① Finished taking down P_{32} at 204.

12-8 ② Continued Pressley's column but had no
such definite peaks.

③ Continued evaporating.

④ Finished pH calibration chart.

⑤ Cleaned up in front of Cell A.

8/31/50

8-4 ① Installation of a "A" cell sump h.t. manometer was
began.

② The Process Filter - Outside Cubicle lines were
checked. No leaks were found.

③ Put 15 lbs of air pressure on A17 tank and checked
all lines except solution addition line inside Cell. No
leaks were found.

8-31

4-12

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- ④ Pop-Value on A17 solution addition was repaired.
 - ⑤ Head burners continued work on Process and Crude Filter cubicles.
 - ⑥ Head was put down in Column Cell
 - ⑦ Continued Evaporating (just going through the motions) on the tank farm.
 - ⑧ Tried W6-W8 jet again. No luck.
 - ⑨ Checked A17 L.L. instrument lines for leaks. [tagged] same when found.
 - ⑩ WC-1 tank has been sampled but not emptied.

- 8-31-50 ① Filled All with Water as per request.
 4-12 Blood ②. Ev. Operations about the same. Jetted WC-1 to W-5.
 ③. Finished filtration for Mr. Russell.
 ④. Pressley's Column operations continued. - Took one product cut. - Turned effluent down drain after peak activity declined to 3 on scale 2. Now awaiting next activity peak.
 ⑤. Picked up I^{131} slugs at pile and started I^{131} run. I^{131} dissolving now in progress.
 ⑥. Ev. Operations deviated from regular routine as per phone call from Mr. Blauer. - Filled evaporator from EFT at 60" to EFT 20". - Then boiled down as one batch. - Maybe this will help prevent foam-overs. - Since this is experimental, perhaps either method of operation could be used.
 ⑦. Jetted 706-D pit and Cell A.

- 9/1/50 ① Off gas precipitator alarm went off at 1 A.M.
 12-8 Shut down according to instructions.
 Schaeich ② Maintenance relamped 900 area fans.
 There are two lights out on the stack.
 ③ Checked FI dissolving at 706-C.
 ④ Checked Grusley's column. No cuts taken.
 ⑤ Continued evaporating.

9/1/50

- 8-4 ① ^{Blow Tank} ~~Blow~~ addition funnel installed.
 Sachs ② Checked all A17 lines and found them to be
 O.K.
 ③ Checked Crude filter for leaves. Everything O.K.
 ④ Works continued on drainage ditch behind 706D
 Bldg.
 ⑤ Had 125 H.P. Motor starter box ~~repaired~~ repaired.
 ⑥ Continued Evaporating (the new way)
 ⑦ Headmen and sheet metal workers worked on
 Process and Crude filter cubicles.
 ⑧ Instrument man repaired A5 L.H. Ringbalance.
 ⑨ Three ledes; A1-A1 P.Pot, A9 overflow, and A17 &
 A9 jet were repaired and checked. They are O.K.

9-1-50 ① Ev. operating fairly well (the new method).

4-12 Blood 55# steam to start & reduced to 50# steam at
 Sp.G. = 1.35. If it should foam-over at this point,
 the run can be dumped instead of wasting time
 with the foam over. It is vitally important
 that we get as much stuff thru the evaporator
 as possible - this week end.

9-2-

12-8

9-

9-2-5

W-12 was taken off the automatic jet and put on manual controlled so that it can be jetticed directly to the EFT. - (a similar operation to W-2 as per log instructions). (Bring W-12 Thru the Xmas tree to EFT)

(2) Continued I¹³¹ - distilled off all of it but ^{1 cut}_{on the last still.} Boiling down in Rm #10. - There will be about 6 liters ~~left~~ of distillate to transfer to Rm #10 for boiling down. - cut off evaporator (Rm 10) at mid-night.

(3) We have been instructed to use the whirly pump to pump out Cell A Sump. This is to help prevent filling up W-12.

(4) Finished C¹⁴ run. Turn off vacuum pump at 205. for Cell II.

9-2-50

12-8 1-Continued with Tank Farm EV.

2-Could not get W-12 to E.F.T. Set to work

9-2-50 8-4 H-BS.

1. Continued evaporator on tank farm.
2. Pumped Cell A sumps couple of times.

9-2-50 H-12

Continued evaporator at tank farm. Had a bad time with Room 616 at EV SP. did not work good.

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- 9-3-50 1. Continued with TANK FORM EV.
12-8 2. LIGHTS ARE OUT AT STACK AREA.

9-3-50 8-4 H.B.

1. Continued evaporator. Dropped run 619.
and 620 and started run 621.
2. Pumped Cell A sump.

9-3-50 4-12 GEP

continued with EV at tank farm.

9-4-50

12-8

9-4-50 8-4 H.B.

1. Continued evaporator.
2. Pumped Cell A Sump.

9-4-50 4-12 GEP

continued evaporator at tank farm.

9/5/50

9/5

4-

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- 12-8 ① There was no Pile Shutdown Monday morning, hence
Sacks no sulfur cans to bring down.
② Brought Pile Units to 902 Bldg.
③ Continued Evaporation on tank farm.

9-5-50 ① Replaced A-20 Inlet water line & checked
8-4 Bldg. it for leaks - OK.

② A-Sump manometer is in service now.

③ Started calibration of A-5 Tank. - Completed
one set of data & started another.

- 19.
- ④ Repaired A6-A16 valve stem ext. handle.
 - ⑤ Ran steam engines 4 hrs.
 - ⑥ Work on drain back of 706-D continued.
Work on S. Tank Farm bldg. & 706-C valve pit continued
 - ⑦ Cleaned up second level of 706-D & 706-D decontamination room.
 - ⑧ Repaired W6-A valve at Ev. - Ev. now boiling down water used as shield in EFT & Ev.
Tried to jet W6 → W8 - no luck
 - ⑨ Lead burners finished up their work on Crud Filter Cubicle (as far as possible). Crud ~~filter~~ & process filter Cubicle had stainless steel cover welded on, and Crud Filter cubicle SS. cover was fitted. Concrete was poured around resin column cubicles.

- 9/5/50
- ① Replaced micromax chart at PB1-15.
 - 4-12 ② Replaced bonnet on H.P. steam header at PB-2.
 - Schaick ③ Adjusted L.P. steam reducer stationed on 3rd pool 706-D to give 25 psi.
 - ④ Electrician repaired low storage light which was shorting out.
 - ⑤ 910 area strobe lights still out.
 - ⑥ Made two calibrations of 45 tank. They check very close to old chart.
 - ⑦ Checked Russell's ~~filtration~~ in 909 Bldg.
 - ⑧ Checked FT dissolving in 706-C.
 - ⑨ Loaned king to Schaeffer to move material from 706-C to 910. Probably exposed.

80

- ⑩ Started checking lines in Cell A. Didn't get very far inside of cell due to maintenance repairs & A5 validation.
- ⑪ Jettied one EFT tank from W2. Continued evaporating.
- ⑫ 901 Locker room needs about 10 lights.

8/6/50

12-8 ① T^{131} dissolver off-gas failed at 5:30 am and we Sachs couldn't get it back. Turned on dissolver jacket water for ten minutes and let temperature slide on down. Temp was about 70°C at 7:30 am. The other off-gas instrument on W. side of cell, indicated that we did have off-gas after draining line but the manometer on P.B. showed nothing. Must be some trouble between ~~the~~ dissolver and ~~the~~ off-gas master valve.

- ② Continued evaporating on Tangle farm.
- ③ Checked some lines in Cell A.
- ④ Melted out 4 & 5 cans and started extractions.
- ⑤ Checked Russell filtration in 902 Bldg. Still going at shift change.

9-6-50 ① Relamped 900 stack area and 901.

8-4 Blood ② Maint. replaced leaking water fountain on 2nd level N.W. corner 706-D; also working on safety shower water line on W. wall 706-D.

- ③ The 1½ ton truck is in garage for clutch repair. (Supposed to be ready at 8:00 AM. to-morrow.)

9/6
4-

- ④ Painter put a coat of paint on PB #3, glassware board on 2nd level and the two instrument board on the W. wall of Cell A. Also start 2nd Coat on steel frame-work of the filter cubicles. Also monorail over process filter cubicles.
- ⑤ Process filter cubicle was cleaned up and covered.
- ⑥ Ev. operations normal. L.L. dampers were replaced to-day.
- ⑦ Work continued around valve pit on W. side of 706-C.; on S. Tank Farm Bldg.; drain back of 706-D.
- ⑧ Maint. repaired following:-
break at
 A2 - coil #4 - leak at union at top. FA2
 A1 - A9A - jet. - leak at Flange on steam side of jet.
checked A1 - A11 - jet - P-Pot nut welded.
 A8 - A5DA - jet - steam leak at inlet side of jet.
 A11 - A5 - jet - leak repaired.
- ⑨ Instr. Maint started repair on following:
 A5 - pop-off valve (rent) - Finished!
 A5 - A5B Thermo-couple. (PB 1-12)
- ⑩ PB 2-17 Micromax chart gears - finished

9/6/50 ① Jost up P³² streets and boiled down at 204.
 4-12 Started 2nd up-takings.
 Schist ② checked Tuesday's column. Still taking hot cut.
 ③ checked sampler lines and some of the jet lines in A cell.

A5 sampler return line leaking at weld
above tank

A11-A5DB - leak at weld at wall (steam side)

A11-A1 - leak at union outlet side of jet.

④ Continued evaporating.

9/7/50

- 12-8 ① At about 5 am, Presley's column quit functioning.
Sachs Upon investigation it was discovered that the condenser under the citrate feed flask was broken and the citrate solution was running out with the condenser water instead of into the column.
② Pulled two extractions at Bagle and started reextractions. Now boiling down crude at 204 Bldg.
③ Checked lines in Cell A.
④ Continued evaporating --.

9-7-50 ① Ev. operations normal (at 40°)

8-4 Blood ② Checked following - & repaired & checked again:-
A9 Sampler door oiled.

A5 Sampler (welded line leak) Check OK

A9-A8DA - Back welded nut on P-Pot - Checked OK.

A11-A5DB - welded leak on inlet side - OK.
- but union on outlet side is
under repair. (not finished)

A11-A1 - union leak - Replaced jet. - Checked OK.

A11-A9 - Leak at top of A9 - welded - OK.

③ A11 - Sparger still plugged.

B10 - A5A & B10 - A5B - ~~jet~~ lines check OK.

9/7/

4-1

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9/8/

12-

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- ④ Water line & safety shower on west wall of 706-D - finished.
- ⑤ Work on S. Tank Farm & back of 706-C continued where possible.
- ⑥ Painters continued painting in 706-D.

9/7/50 ① Pulled 3rd extraction and boiled down at 204 4-12 Bldg. Started 4th extraction.

Schaeck ② maintenance repaired steam leaks at A-2
Did not change traps.

③ Pumped out Cell A rooms and column while.

④ Set up form shut boxes at EV + 706-D.

⑤ Boiled down FI in Room 10

⑥ Emptied A-9 and checked A-13 jacket with 4 liters of H₂O. It is okay.

⑦ Removed all tags and rays from tops of tall tanks and removed one can of stuff from the floor. Cleaned up in front of Cell A & hallway.

⑧ Checked heel dissolving at 706-C.

⑨ Completed P³² run at 204 Bldg and brought product to 902. Did not sample.

⑩ Continued evaporating.

⑪ No lights at S.O.

9/8/50

12-8 ① Checked T¹²¹ heel dissolving in C Bldg.

Sachs ② Pulled Extractions at Bagle and boiled down at 204 Bldg.

③ Sampled P³² Product.

④ Continued Evaporating on Tank Farm.

⑤ Cleaned out some crap in Cell A.

6. All sparger seems to be working O.K. now.

9-8-50 ① Finished A11-A5B repairs - checked O.K.

8-4 Blood ② A11 sparger worked for a while, then failed.

Removed it. - Unplugged it, blew out air line & steam line & Replaced sparger. It worked for a while, then failed. - Removed it again - Welded a union on Sparger line and stored the removed piece in Superv. office^(706-D). - To be Continued Mon.

③ Ev. op. Normal - Called twice for lights at S.B.

④ Maint lagged ^{drain} water line on W. side of Cell A and lines back of PB #1. A platform was built over lagged lines back of PB #1 - to prevent damage to lagging by foot traffic.

⑤ Leak in new water line at safety ^{shower} on W. wall 706-D was repaired. - Also steam valve leaks on 2nd level. Chicago Coupling at process filter Cubicle was extended.

⑥ Mono-rail at Crud filter Cubicle was welded in place.

⑦ Loading cubicle arrived at 706-D - Tested it by filling it with H₂O. Lots of leaks.

⑧ Thermo-couple ASA-A5B was repaired to-day!

9/8

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9-9-

9-

9-

9-10

9-11

9/8/50 ① Checked Tuesday's column all shift.
 4-12 ② Took FT carrier to 105 Bldg.
 Schach ③ Pumped out Cell A & cleaned up.
 ④ Continued evaporating.

for
 -
 9-9-50 12-8 H.B.

1. Continued evaporator.

To be 2. Pumped Cell A pump couple of times

9-9-50 8-4 GEP

continued evaporator at 4545 stars PSI.

11A
 11/14 9-9-50 4-12

9-10-50 12-8 H.B.

1. Continued evaporator.

2. Pumped Cell A pump.

led 9-10-50 8-4 GEP

continued evaporator at tank from
 Maint Replaced union and ~~sp~~ coil
 trap in evaporator

-day!
 9-10-50 4-12.

9-11-50 ① Ev. operations normal.

12-8 Blood ② Decontaminated sink at Bagle - now = 100 mr/hr.

③ Checked A11 - A5 DB jet. again. - It jets OK - but P-Pot doesn't work on that line - and since it was welded on inlet steam side there was some question whether the line was stopped up.

④ Brought down the pile units.

⑤ Pumped Cell A Sump.

⑥ Checked A5 Calibration.

9/11/50 ① Painter finished littering all Panel Boards.

8-4 ② Replaced 911 oxygen tank and checked all drift. Schach Works okay above 60 psi air.

③ Replaced PB-5 trough. (Started)

④ Taggers finished work on PB #3.

⑤ Instruments replaced dampeners on EV L.L.

⑥ Opened Cell II and found background of 5R. Heimmed up B20-B19 valve and tightened down. Removed Tygon + wire from B20 valve to B19 line. Tunnel rack line to B20 R line is inserted in Cell II.

⑦ Walker worked on Product uptake liner.

It is okay. Jetting water out at drift change.

⑧ Continued evaporating.

9/11/50

4-12 ① Pulled sample out of WB for P.B. On.

Sachs ② Investigated High sump level in Evap.

The stuff seems to be water, and not feed on Evap solutions. Condensers seem O.K.

9-12-

12-8

9/12-

8-4

Schach

- Mr./hr.
OK-
d
side
line
- 9-12-50 ③ Checked I^{131} dissolving in C Blkg. Readings on the hour.
- ④ Checked Rimshaw's column in Cold lab, 902 Blkg.
- ⑤ Replaced B19 valve to B19 S.S. line in Cubicle II, and wired. It has not yet been taped.
- ⑥ Continued Evaporation on Table 1amm.

- 12-8 Blood ② Checked I^{131} dissolving.
- ③ Ev. operations normal.
- ④ Checked A11 sparger with air. - Seems OK.
- ⑤ The pile operations could only locate 3 cans of S - (Don't know where the other can is.) Melted out 2 cans and started one extraction - E1. The other ^{can} was melted out in the tube and left under the ~~extractor~~ melter. (Perhaps the "lost" can of S can be accounted for on day shift.)
- ⑥ Tygon tape for ~~top~~ wrapping tygon line installed in Cell II could not be located. (Shift Superv. could not locate it either.)

- 9/12/50 ① Taped and checked B20-B19 line and it is okay
- 8-4 Replaced plug and closed off.
- Schmid ② Checked A17-A9 + A17-A8 jets and found leaks on both of them. Replaced both jets and checked lines. They are okay.
- ③ Welder repaired leaks in Product cubicle liner.
- ④ Lead turners placed lead shielding under triangle formed by cubicle liner and sump liner.
- Feed

9-13

82-8

Bl00

- ⑤ Cleaned up behind 1110 & 1111 tanks.
 ⑥ Scraper to FT all shift.
 ⑦ Boaned fire hose to 905 Bldg.
 ⑧ Ran steam turbine 4 hours.
 ⑨ Sheet metal workers finished grinding C.F. lining.
 Cleaned and covered C.F. cabinet.
 ⑩ Instruments worked on EV 1.2. Seems to be okay.
 ⑪ Painters put first coat on Cell FT framework.
 ⑫ Utility men continued lagging in 706-D and started laying linoleum on 2nd floor.
 ⑬ Maples checked plugcock valves above W18002 while 205 jackeded Cell I. No overflows as yet.
 ⑭ Continued evaporating.
 ⑮ Bought 1 roll tygon and 6 rolls of tape from stores. It is stored in 706-D glassware cabinet.

9/12/50

4-12 ① Pulled extractions at Bagle. Now boiling down. Started Sacks reextractions.

- ② We are operating the evaporator with Coil J cut off and pressure on two other coils at 50#.
 An Elbow on ~~on~~ Coil J condensate return line is broken open and condensate ^{was} pouring all over cell floor. The broken elbow is located about 8" from the East wall of the cell. Ditched floor dry and put another $\frac{1}{2}$ " in W5 in the process. 12-8 can run up steam pressure to get 400 gals/hr.
- ③ Had maintenance put 902 Bldg crane back on the track.

9/13

4-1

Sa

- 9-13-50 ① Boiling down P^{32} at 204. Started 3rd
 82-8 extraction at Bagle at 5:30 - 6:00 AM.
 Blood (P.B. Orr - see note on 2nd extraction of E1 + E2.)
 ② Pumped out pit at 706-D.
 ③ Ev. status:
 - Ran Ev. without Coil 1 "J". Operated Ev. on
 5 steam coils at 55 - 60 - 65 psi. —
 - 65 psi gave near 400 gal./hr. — adjusted
 Ev. condensate temp. to 60°C .

- 9/13/50 ① Painters finished work on Cell A.
 8-4 ② Utility men continued laying insulation on
 shaft 2nd level.
 ③ Riggers put product cable liner into place.
 ④ Replaced steam outlet line on coil 5 with
 S.S. line. Started up at 2 PM.
 ⑤ Cleaned out C.F. cable and front of Cell A.
 ⑥ Painters finished steel work under 2nd level.
 ⑦ Instruments started work on A17.
 ⑧ Continued evaporating after 2 PM.
 ⑨ Schaefer to FI all night.
 ⑩ Pickup is in garage. Using AE-1534

- 9/13/50
 4-12 ① Completed I^{131} evaporation in room 10. Moved
 Sacks to distillation flask and sampled.
 ② Pulled two extractions at Bagle. Boiled
 down at 204 Bldg. About 500 ml to go. Started
 Reextractions.
 ③ Continued Evaporating on Turke Farms.

90

- 9-14-50 ① Ev. operations normal. 9-15
12-8 Blood ② Finished boiling down extract (C1B) at 204, 12-8
and started run thru - P32 now at step #55
in S-2 evaporator. Boiling down extract C1C which 9/15,
was taken off at 2:00 AM. - Started re-extraction 8-7
at Bagle E1 + E2 at 2:45 AM. Schach
③ Installed a burette dispenser for HNO₃ at
Bagle.

- 9/14/50 ① Electricians relamped Cell A.
8-4 ② Instruments continued work on A17. Will need
Schach a new reducing station to get oxygen air supply.
③ Utility men lagging steam to Bagle.
④ Maintenance restarted work on pit S. of 0014.
⑤ Started clean up of P5-1.
⑥ Electricians removed pedestal fan motor to shop.
⑦ Bent hot tools to 903 Bldg and cleaned up D Bldg
office. Separated and stored rubber gloves in desk
drawer.
⑧ Carpenters built forms for cement pit around A16 9/15,
by-pass valves. 4-12
⑨ Continued evaporating
⑩ Made up new Pre-run check sheet.
⑪ Pipefitters working on new air reducing station
under 2nd level.

- 9/14/50 4-12 ① Continued Evaporating — 9-16
Sachs 12-8
② 8-7

9-15-50 ① Ev. operations normal.

12-8 Blood ② Cleaned PB #4A, #4B + #5.

9/15/50 ① Jettied 2' out of W4 to W5. Steam down line.

8-4 ② Replaced new battery on intercom system.

Schaeid ③ Found concrete for A16 bypass pit.

④ Raised EV pressure to 60 ft.

⑤ Cleaned out tool cabinet.

⑥ Muggs continued work on S. tank form.

⑦ Finished tying in new air reducing station and checked out V/A17 instrument. It is okay.

⑧ Started calibration of A17.

⑨ Started post holes for new fence around 900 stack.

⑩ Carpenters made up forms for W14 steam pit.

⑪ Pipefitter replaced copper line on A16 manometer.

⑫ Continued evaporating.

⑬ Sheet metal workers put in pipe trough between column cribs and product crib. Also worked on P.F. cribs.

9/15/50

4-12 ① Attended to Rinishan's column work in 706 C Bldg. Sochs. and shut down equipment at 10:30 p.m.

② Cleaned up P.B #2 and 3.

③ Continued evaporating. Dropped Pressure 3 lbs to .57 lbs. We were running a little hard.

9-16-50

12-8 Continued Evaporator at tank form.

SCPP

9-16-50 8-4

Shut down vacuum pump at 8:30 AM
 (evaporator was already down) but was informed
 that process water shut down would occur
 late in the evening if at all, so started
 the pumps and evaporator at 9:40 AM. Nothing
 else heard on this shift.

4-12 1. Continued with Evap.

9-16-50 2. No water shut down on this shift.

9-17-50 Continued evaporator at tank farm -
 12-8 foamed over about every half hour and half
 with steam Pres at 35#

9-17-50 8-4

Started run # 652 at the evaporator

4-12

9-17-50 1. Continued with Run # 652 at the evap.

9/18/50 ① Finished calibrating A17 tank.

12-8 ② Cleaned PB-1, 6, & G.P.B.

Schmid ③ cleaned up Eagle

④ continued evaporating

⑤ took FI carrier up to 105.

⑥ brought file units to 902.

⑦ brought FI slugs to 706-c.

9/18/

8-4

Sat

9-18-

4-

B10

9/19/

12-

SUN

9/19/

8-

Sat

- 9/18/50 ① Received 3 drums of waste into W7 from 706 H.B.
 8-4 ② Dumped K25 waste into W7.
 Sacks ③ Continued Evaporating. Raised Exp. L.L. back to 35". Coil Pressure still at 30 lbs.
 ④ Sheetmetal workers continued fabricating pipe brought in 706D Reserve Cubicles.
 ⑤ Cleaned up P.T.S. #2.
 ⑥ Ramsay to Iodine all shift.

- 9-18-50 ① Recorded data on I^{131} dissolving at 706-C.
 4-12 ② Continued Evaporating - dumped run & starting Blood another at 30" L.L. + 30# steam. Still foaming.
 ③ Removed & stored chemicals that were on the loading dock at 706-D.
 ④ Finished Ladd's evaporation in bldg. 907.
 ⑤ cleaned P.B. #4A, #4B + #5.

- 9/19/50 ① Melted out 3 sulfur cans and started 12-8 extractions at 5:30 A.M.
 Schach ② flushed FI dissolving in 706-C. offgas pipeline at 4:30 A.M. Shut off vacuum for 2 min. and he started back up.
 ③ Washed out makeup room & sec. room. Weighed up 3rd level scales.
 ④ Continued evaporating. No foam overs

- 9/19/50
 8-4 ① Maintenance cleaning out 706D Bldg water stills at shift change. They both had stopped operating properly today.
 Sacks ② Continued Evaporating on tank farm.

- (3) Work continued on the Recirc Cubicle Pipe troughs.
- (4) Brought in Run 42 glassware Rinse carrier from Cander, cleaned and stored over hot lals.
- (5) Ran both steam turbines for four hours.
- (6) Presented Ken Lewis with a long list of tank farm signs.
- (7) The North Still is now operating. South still being worked on now.

9-19-50

- 4-12 ① EV. operations doing well at 30" L.L. + 40[#] Steam.
 Blood ② Jetted out pit at 706-D - also stored rubber
 gloves & overshoes at Superv. office in racks.
 ③ Had lights replaced at 900 stack area.
 ④ Took up extractions at Bagle & started
 re-extractions at 5:00 P.M. - Boiling down
 extracts at 204. - still boiling at shift change.
 ⑤ Finished Ladd's ~~filter~~ filtration at 907.

9/20/

8-4

Sach

9/19/50 ① A16 cell valve is open about halfway. Extension 12-8 handle will have to be connected.

- Schmid ② Started Recirc check and corrected new sheets. Bank A batteries charging till 12:20 PM.
 ③ Maintenance replaced steam traps on PB 5 H.P. steam line. Also replaced gasket on PB 4A 6 header flange.

9-20

4-

B10

- ④ 3rd level H₂O cooler needs repaired. Water leaking thru floor to 2nd level. Also PB 4A drain needs unplugged.
 ⑤ Replaced air reducing station and gauge at Bagle with proper equipment.
 ⑥ Took up 2nd extractions at Bagle but lost

approximately 300 ml out of each extraction due to
burn gauge and closed air header.
 ① Boiled crude at 204 to 50 ml.
 ② Continued evaporating.
 ③ Found aspirator running into 907 hot sink.
 WC filling with water.

9/20/50

- 8-4 ① Pulled two extractions at Beagle and reextracted.
 Sachs Steam on at 1:30 p.m. Took 3rd extractions to
 204 and delivered to G. Sutton.
 ② Checked sampling equipment.
 ③ Continued Pre-Run checks. All repairs made.
 Beagle B Batteries charging until 8:20 p.m.
 ④ Continued Evaporating on Tumble Farm.
 ⑤ Instrument man worked on P.B. #2.
 ⑥ Work continued on Resin Cubicle Pipe troughs.
 ⑦ Ramsey to Rinshan's 706C columns all shift - .

- 9-20-50 ① Emptied all Cell A tanks.
 4-12 ② Evaporated I³¹ - Practically finished - Should be checked
 Blood ③ Boiled down Crude P³² at 204. - Started to
 evaporate P³² in final evaporator, but had
 difficulty with timer & variac shorting
 out. Had timer relay repaired and then
 the variac under crude evaporator shorted
 out - (plenty of fire this time) - At first it
 was thought that two variacs on the line
 were ~~too~~ much load since a fuse burned
 out. Called P.B. Orr. - He said the line

would carry the load of the 2 variacs.
 After line fuse was replaced then the "Crici" variac burned out. - P.B. said that the final evaporation of P^{32} product should be continued on the 12-8 with the other variac. Took up extracts at Bagle at 10:00 P.M.
 - Partly filtered into Crici evaporator at 204. -

② Ev. operations OK

9/21/50 ① Finished evaporating P^{32} product and took up 12-8 product. Submitted samples to lab.

Repaired ② Replaced burned out variac at 204 but then found timer was shot. The relay contacts were welded shut. Relay will have to be replaced. Hooked crude evaporator to final EV variac but variac started to smoke. This leads to the conclusion that the crud EV mantle is shot. Stopped work at 204 at this point.

③ 900 stack lights are out.

④ Continued evaporating.

9/21/50

8-4 ① Continued Evaporating.

Sacks ② Started Dummy Run. Loaded 70 4" Hanford slugs by hand. Started at shift change; 1st Coatings Removal cooling down to 60°C . Note that one Al thermocouple is out. Point 5 on Micromax is only correct reading of Al temperature. The HNO_3 and NaOH for the 2nd coating removal are in the weigh tanks.

COLD

9-2

4-

B10

9/

12

Sc

3. Dumped Acids.

- * 4. Made up K_2CO_3 and $Pb(NO_3)_2$. They are in the lab.
 5. Maintenance installed Chain Fall and Lead Plugs
 at the Process Filter cubicle.
 6. Steel for the new monorail support was delivered
 to 706 D Bldg.

7. Work continued on Resin Cubicles.

* 8. $Pb(NO_3)_2$ - 14.9%, K_2CO_3 - 39.2%

9. Work continued on alignment of loading cubicle

10. Maintenance has the sampling tools for Pala-
 goon for repairs.

9-21-50 ① Fished out empty $Ca(NO_3)_2$ slugs at 205 - Cell II.

4-12 Found one uncut slug in dissolver and left
 Blood it under safety shower near drain.

② Ev. operations normal.

③ Finished 2nd Coat removal on dummy run
 at Cell A - 706-D. Ready to add HNO_3 for
 dissolving in Al. -

④ Emptied all HNO_3 Carboys.

⑤ Checked all lines used in Cell A.

⑥ No towels again! 2nd or 3rd time out of 4 days
 this week.

9/22/50 ① Made up new tygon transfer line for P^{32} trans-
 12-8 vesel.

② Maintenance boosted L.T. steam to 25 psi on
 706-D P.B.s.

③ Pulled E2 retract at Bagle & left transfer
 pack + solution at Bagle.

④ Continued evaporating.

⑤ Dummy run status: Batch A dissolving.

9/22/50

8-4 ① Maintenance returned Rata Sample tongs.

Sacks ② Dummy Run Status:

A1 - Batch "B" dissolving started at 3:30 p.m. Check with Blaser for details.

AII - Batch "B", diluted and sampled. Hold!

③ Instrument men worked on A1 ring balance all shift. Still not working correctly.

④ Holes were drilled over hot labs for setting steel for new mono-nail supports.

⑤ Cmed. Filter lead plugs arrived at Bldg, but have not been placed.

⑥ The steam lines to the A5-A8 and P.F. sump - W12 were relocated to make room for new chain hoists.

⑦ Continued Evaporating on Tare ^{in Cell A} Tare.

⑧ The following lines were checked during operation and no leaks found. A1 sol. addition, A1-AII jet. A1 jacket steam and water, A1 sampler.

⑨ Instrument men repaired A1 thermocouples.

⑩ More lead was placed in Resin cabinet.

⑪ Reflooding the Bldg with new liquid was begun.

9-22-50 ① Dummy run status:

4-12

Dissolving batch "B" - Sp. G. = 1.58 at shift change.

Blood

L.L. is OK on A1 Ring Balance; but Sp. G. is

obtained on manometer. (manometer reading) = Sp.G.

- ②. Ev. operations normal.
 ③. Removed $\text{Ca}(\text{NO}_3)_2$ slugs at 204. dissolver.
 ④. Took I^{131} carrier to Bldg 105.
 ⑤. Cleaned up papers around vacuum pumps
over hot labs. at 706-C.
 ⑥. Had H.P. check A.E.C. truck. Alpha
contamination at right front corner 100 d/min.

9-23-50 12-8

Ridated 1MB at 3:45AM, Sp Gr 1.62, sampled
and closed panel board down.

1. Continued with Davis F211A Ev.
 2. Checked solvns in Tanks A-1 & A-11.

9-23-50 4-12 X-B.

1. Continued evaporator and tank farm operations.

9-24-50 12-8

Started run #660 at the evaporator

1. Continued with Run 660 at the Evap.
 2. The Sp. Gr. needle and manometer are
on zero, A-1 TANK.

9-24-50 4-12 - X-B.

1. Continued evaporator and tank farm operations.

change.

= Sp.G.

100

9/25/50 ① Continued Evaporating on tank farm. One foam over.
12-8 ② Didn't get Pile units. Some sort of operating
Seals difficulties at 105 Blag.

9-25-50 ① Maint. Continued work on R.C. monorail
8-4 framework.

Blood ② Maint. worked on shelter at Cottrell Precipitator.
③ Maint. worked on Crud filter Cubicle till noon.
④ Batch "A" was filtered thru Crud filter
to A17 & transferred from A17 to A9.
Extracted at A9 is starting.

⑤ S-A9 addition funnel was found plugged.
Plumbers were notified. - Used the
other funnel. -(line unplugged at shift change)
⑥ Maint. replaced the defective thermo-couple
at A1 tank. - Also calibration of A1 Sp.G.
was accepted.

⑦ All lines used in Accell were checked.
- A10 Condenser jacket. - A17-A9 Transfer line.
- C.F. #1 - etc. A9 addition line -

⑧ Evaporator doing OK at 45# steam & 35" LL.
Changed tygon tubing at DB-SB-R.P.

9/25/50 ① Pulled C¹⁴ bugs from A11 dissolver.
4-12 ② Watched 706-C FI dissolving
Schmid ③ Regenerated columns at 1304 Blag and cleaned
up equipment. One more H₂O wash to go then S-1
④ Continued evaporating. Lowered L.L. to 30".
⑤ Dummy run: - finished Batch A extraction
and started filtration to A8 but PF-A8 jet

(PF-2)

plugged or filter plugged. Stopped filtration and set valves for filtering from A9-PF-A17. Still filtering very slowly at shift change.

⑥ Maintenance repaired PF-A8 stream gauge and line.

⑦ Checked following in Cell A.

A8 + A9 jacket H₂O

A19 condenser

PF-A8 jet & lines

A9-PF line

PF-A17 line

A9 jacket H₂O leaking at union at bottom A9.

⑧ Backwashed CF-1.

⑨ Following need repair at 204 bldg: fluorothene off gas line to crude EV. P-1 stopcock is slipping.

⑩ B17 probe light is out.

9/26/50

12-8 ① Took 100 Ca(NO₃)₂ slugs from Pile to Cell II.

LL. Sacks ② Melted out three sc cans and started extractions.

③ Continued Evaporating on tank farm.

④ Checked I¹³¹ dissolving.

⑤ Shut down A9-P.F.-A17 Filtration at 1:30 am when it was apparent we weren't getting anywhere. Tried it again at 4 am. with no more success.

Evidently, shutting off vacuum on A17 tank has a poor effect on the Moore transmission L.H. instrument. The 3rd level instrument went to zero after shutting down at 4 am. No air

102

was getting through the diaphragm regulator on the high side. Instrument man repaired.

9-26-50 ①. 125 H.P. Blower alarm failed. - To be repaired 8-4 when parts are available.

Blood ②. Ev. operating OK at 30" L.L. + 40# Steam.

③. Operated 2 steam turbines at 900 stack area for 4 hrs.

④. Inst Maint. checked A1-Sp.G. & repaired A9 Contact microphone - Also repaired micro-max #14277 - PB#2.

⑤. Work continued on R.C. monorail framework.

⑥. Dummy run status:-

posted the "cake" off P.F. #1 & 2 with ~~1 gal.~~ H₂O. - Then put all product solns. from A8, A9 & A17 into A11. Then used .5% soln. of NH₃ HF₂ to wash out lines & tanks A8, A9 & A17 & P.F. #1 & #2. At present soln. of NH₃ HF₂ is in A9 to go thru P.F. #1 to A8. - A Th is line or jet (A8-P.F.) appears to be plugged. See Mr. Blauer for future details.

checked lines A17-A9
A17-A8
A9-A8
A8-A11

9/26/50 ① Pulled empty C⁴ slugs from divider at A.I.T.

4-12 ② Simons finished spraying F.I and left one
shark or two transpers from cell to Run 10 to be boiled
down.

③ Pulled P³² C1 extracts at Beagle and boiled
down at 304 Bldg. Started reextractions.

④ Continued cooperating.

⑤ Dummy Run: Finished unclogging PF-1A8
jet and jettisoned NH₄HF₂ solution thru both PF-1
& PF-2. Transposed solution thru A17, A8, A9,
PF-1, PF-2, and all connecting lines. Sent
solution to A5 > W12. Started first 9 gal water
wash thru above lines. Doing thru A9-PF2-
A17 at shift change. 12-8 continue
washes according to procedure at PB-2 and
then shut down.

⑥ Checked Trons & precipitator every two hours
Operating okay.

9/27/50

12-8 ① Continued with water washes through process
tanks. Now doing the A9-PF²-A17 runs. Opened
up P.F. 1 inlet and outlet valves because P.F. 2 was
so slow. Shut still at P.B. 2 tank.

② Checked electrical precipitator and main
units. Seem to be O.K.

③ Took up two P³² extractions and started
reextractions. Took crude to 204 but was
unable to suck the stuff to the Evap.

④ Transferred ~~old~~ and boiled down iodine all shift. Just about through at shift change. Coverage until 7:50 a.m.

⑤ Continued Evaporating

9-27-50 ① Ev. operations normal.

8-4 ② Maint. continued R.C. Monorail Construction.
Blood. ③ Maint. continued laying linoleum on 2nd level 706-D.

④ Dummy run status:

Continued washing P.F. 1+2 with .5% soln. of NH_3HF . Back-washed filters also.

Tried filtering thru H_2O again & they plugged again. - Shot off filters - Washed out all tanks & lines containing NH_3HF and turned P.F. #1+2 over to Mr. Higgins of Development. P.F. 1 was removed 3:30 P.M.

Lines checked: A8-A9 - OK.

A9-A8 DB jet. - ~~leaks~~

(leak was repaired 3:45pm).

9/27/50 ① Replaced broken female joint on 732 transfer flask. and ^{changed} end filter at Bagle.

Schaeid ② took up 3rd extraction and started 4th extraction at Bagle at 5:15 PM. Boiled cude to 500ml.

③ Shift had X rays taken at dispensary.

④ Checked FT dissolving at 706-C.

⑤ Checked Ions & Precipitator.

⑥ Precipitator kicked out once.

9/2

12

Se

9-28

8-

Blo

⑧ Made up 8M caustic, sprayed in A17, boiled in A9 + A8, and jettied to A5. Sent 50 gal H₂O wash thru A17, A9, A8, + A5. Followed with 25% HNO₃ and wash sprayed in each tank and neutralized with caustic in A5. Sent to W12. Did not get final water wash thru.

⑧ Continued evaporating. Main water header to addition manifold needs revised.

⑨ Run P-13 transferred to P-1 and stopped at this point. 8-4 will finish run.

9/28/50

12-8 ① Shift got X-Rayed.

Sachs (2) checked T-31 dissolving. OFF-gas failure at 5 am.
Got it back by shutting dampers at stack manifold
for several minutes and then re-opening. No air
activity.

③ Run a 50 gallon wash from A17 - A9 - A8 - A5 - W12.

④ Both Precipitations van O.K.

⑤ Took up 4 hr extractions to 204 B1dg. Boiling down at shift change.

⑥ Maintenance replaced Pop-Valve on A8 jacket line.
⑦ Continued Evaporation -

9-28-50 O. Ev. operation : 35" L.L. - 50# steam on 5 coils.

8-4 "J" Coil sprung at a leak at the union-(outlet side).

Blood. ②. ~~Leak at~~ A9 - A8 DA jet was repaired.

Also a leak in $A_8 - A_{16}$ vacuum line was repaired.

③ Maint. still working on 2nd level floor - 706D.

④ P.F. #1 & #2 were returned. - P.F. #2 was

plugged after 100 gal. water wash from A17 - A9 - P.F. #2 - A8. - Next : - decided to put 5 - 100 gal. water washes thru A17 - A9 A8 bypass to A8 - still washing at shift change. P.F. #1 is clean - yet! - Started #5 water wash thru P.F. #1.

⑤ Micro-max #12 P.B. #1 had a "squeal" which Intr: Maint. fixed up.

⑥ Work Continued on R.C. Monorail frame work.

9/28/50 ① Sent two water washes thru A9 - P.F. #1 - A8 4-12 and recorded data every ten minutes. Lowest Schenck filtration time 1.1 gal/min. Highest 2.0 gal/min.

② Cleaned 2nd & 3rd level 706-D and unplugged 3rd level drains.

③ Continued washing from A17 - A9 - bypass - A8 with H₂O.

④ Dalled 0" slugs from dissolution at cell II.

⑤ Precipitator alarm sounded but high voltage would not kick back in. Shut down complete apparatus.

⑥ Finished taking up γ^{32} product and submitted samples to Lab.

⑦ Lemons finished FI spraying. Boiling down in Run 10 at shift change.

⑧ Continued evaporation. Raised pressure to 55th.

9/29

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9/29/50 ① Boiled down Iodine most of the shift.

② Triplex units working O.K.

③ Continued evaporating.

9-29-50 ① Ev. operating on 5 coils at 30" LL. + 55# steam.

8-4 ② Instr. Maint. removed B17 Probe for repair.

Blood Also checked Micromax # B 48566 - P.B. #2.

③ Work continued on R.C. Mono-rail + R.C. + pit 706-C.

④ Starting making up Na_2CO_3 soln. in $\frac{\text{M}-1}{\text{FZ}}$.

(#600 Na_2CO_3 in batch). - Maint. was called to replace fan belt in the make-up frag room. Dissolving at shift change.

⑤ Checked A8 + A9 Sampler lines.

⑥ Dummy run status:

Continued batch A from A-11.

Re-extracted

Now filtering re-extraction at P.F.#2.

Batch B in A1 yet.

9/29/50 ① Checked Trions and Precipitator. Both okay.

4-12 ② Continued evaporating.

Schaeck ③ Need a slide rule at 706-D.

④ Checked lines used in cell 19. All okay.

⑤ Jettied out pit in 706-D.

⑥ a) Finished filtering batch A.

b) Took 8WMA sample and jettied batch A to A5 and neutralized. jettied to A6-W9 - 480 gals.

c) Jettied batch B - A11, added F.A., precoated QF #1, filtered to A7, jettied to A9, made extraction

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and filled them PF#2 to 48. Stopped filtration after 1 hr + 20 min due to plugged filter.

③ Backwashed CF #1

④ Shut down process and all P.B.

⑤ Checked P^{32} product going thru column at 906. Water wash has been added. Boiled down to

⑥ 200 ml and shut down till 8-4.

⑦ Run P^{32} 14-1 is setting in 5-2. Had trouble with vacuum lines.

⑧ Jettied USC-1 to WS5

9-30-50 1. Continued with TANK FARM EVAP.

12-8 2. Checked LINES in 706-D Bldg. To 11-12
ALSO SINKS IN 1205. ALL OK.

9-30-50 8-4 H.B.

1. Continued with tank evaporator.

2. Checked 706-D Bldg.

9-30-50 Continued Evaporator - on tank farm

A-12 - Jettied Pit in 706 D.

1. DUMPED RUN #664 AND STARTED 665 AT THE EVAP.

2. THE H.V. SWITCH KICKED OUT THREE TIMES THIS SHIFT ON PRECIPITATION

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See

10-1-50

8-4 H.B.

- thatatin
1. Coordinated with tank farm operations.
 2. Checked 706-C & D Bldg. and precipitator

10-1-50 4-12 GEP

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contained F.V. at tank farm -
checked 706D.

Ran PF1 to ~~PF1~~ A-8 for 5 hrs A-8 is full
let sit until 8 to 4 Monday -

10-2-50 ① Maint. repaired a steam leak near the make-up
12-8 tank at W-2.

Blood. ② Took I¹³¹ Carrier to 105.

③ Delivered the Pile Units to 902.

④ Worked on decontamination of B-17 probe -
not down yet.

⑤ Cottrell Precipitator at 900 stack area coked
out twice.

⑥ Decontaminated Ev., EFT + concrete cell.

Used 10% HNO₃ on Ev. tank + EFT - (60 in. of soln.)

Filled EFT with H₂O + now filling Ev. tank
with H₂O.

⑦ P³² status:-

Last wash in S-2 evap.

Two washes thru column to final evap.

10-2-50 ⑧ Checked Hot Pit west of C Bldg. Opened 706-D-W12
8-4 valve + 706-D-W9 valve. Closed 3025 Bldg-W12
valve, 3025 Bldg-W9, and 706-C-W9 valves.

⑨ Replaced gasket on EV steam control valve.

- ③ Repaired coil T union.
- ④ Repaired H₂O addition line valve.
- ⑤ Repacked steam valve valves.
- ⑥ Placed blank flanges on EY tank for new probe system.
- ⑦ Started up evaporation at 35° & 60 psi and boiled H₂O out of EY & EFT. Started new run.
- ⑧ Made Na₂CO₃ and jitted to A5. Neutralized part of batch B from A8. Backwashed PF #1 several times and continued filtration of first of batch B.
- ⑨ Bring to FI and C'4 all shift. Lemo to FT.
- ⑩ Utility oven continued laying linoleum at 706-D.
- ⑪ Finished filtration. Last water wash going in at shift change.
- ⑫ H.P. checked acid cartons + bottles. Sent bottles to 706-A.
- ⑬ Replaced micromat chart PB-1-2, PB2-7.

10/2/50

- 4-12. ① Had a lot of trouble with the Exp. Feed was Sacks. Found to have a pH of 3. Set up one inch out of W8 to W5. to correct this situation. Then the W5 to E.F.T. jet failed to function. Finally got it going after washing jet line with water. Pulled Special C.T. sample which was ~ 2300 counts. Kept throwing C.T.s back to W5. pH of Feed is now 8 and things appear to be approaching normal at shift change. Blauer

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B/6

wants an evaporation rate of no more than 400 gals/hr.

- ③ The W12-W5 jet failed to cut off automatically one time. 12-8 might check it.
- ④ Removed $\text{Ca}(\text{NO}_3)_2$ slugs from C⁴ dissolver.
- ⑤ Checked I¹³¹ dissolving.
- ⑥ Electricians repaired SIB sampling pump. Electrical hook up was faulty.
- ⑦ Cottrell Precipitator ran O.K. all shift.
- ⑧ Completed last extraction wash through P_F, neutralized As waste in A5 and sent to W9.
- ⑨ Jetted Pit in 706 D Bldg. Had longer L.P. leg put on and are now having trouble getting the jet to work properly.
- ⑩ The Business end of the B17 probe is down to about 300 m.u./hr.

- 10-3-50 ① Evap. finally operating at 30"LL + 30# steam.
 -7. 12-8 Had difficulty with foam-overs. - Found that Blood raising LL + 35# steam would not work. Then tried 30"LL + 30# steam which finally did work.
- ② Started the "Donkey" at 916 as per instructions.
- ③ I¹³¹-checked dissolving.
- ④ B-17 Probe is now set in soln. of "Versene". It reads now about 200 mr./hr. - after periodic scrubbing and scrapping.
- ⑤ Jetted pit in 706-D.

10/3/50 ① Ran steam turbines 4 hours.

8-4 ② Lead burners started placing more Pb around
Schmid W13, 14, & 15 pits.

③ Continued work on 900^{stack}, area fence

④ Coil T at EV is leaking at weld. Will be
repaired tomorrow.

⑤ Laborer laid cement pipe at S.B. outlet.

⑥ Poured concrete around product cubicles.

⑦ Instruments took B17 quote against Pt.
grades are in my desk.

⑧ Continued evaporation.

⑨ Lemons to FI all shift.

⑩ Started training H. Blaauw at EV.

⑪ Pulled PF 1 & 2 and cleaned at semi-works.

Put back in place and A717 - A9 - by Pass
- A8 washed with 50 gals since 5 times.
Started acid run of 110 # 60% HNO_3 , diluted to
40 gals in A1, jettied to A11, filter aid added,
P.F. #1 prereated, and solution run filtered to A17.
Jettied to A9 and uptakeon started without
Pb addition. Digesting at shift change. Did
not backwash CF#1.

10/3/50

4-12 ① Tried to filter the HNO_3 - H_2SO_4 from A9 to A8
Sachs through P.F. - 1, and P.F. - 2. Both filters plugged up
in short order. Proceeded with washes as
prescribed by H. Blaauw and passed on the word
to Blood

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- ② Continued Evaporating on T.F.
- ③ Note T.p. on R.P. sample. Another high one at 11 rpm might warrant investigation.
- ④ Completed all P^{32} work in 906 T3 deg.
- ⑤ Backwashed C.F.-1 to W-12.
- ⑥ Removed $Ca(NO_3)_2$ slugs from C^{14} dissolver.

- 10-3-50 ① No oral or written instructions were received about work on the Columns at 706-C. Checked to see if any equipment was operating - Everything appeared to be shut down.
- 12-8 ② Took up P^{32} at 204. - Reading 1.3 r/hr.
- ③ Ev. operations normal. New run started at 30" LL + 30# steam.
- ④ Carried out instructions for H_2O wash after NaOH. Passed HNO_3 soln. from A-17-A9 - A8 Bypass to A8 to A5 - W-12. - Then washed with H_2O again. - Made up $HNO_3 - H_2SO_4$ in A9 - Digested at 80°C - 90°C for 1 hr. - Now cooling.
- ⑤ Cyclone-separator drain valve extension should be checked. Inside Cell A next to the wall, the extension appears to be about half into.

10/4/50 ① Welder repaired coil 5 at EV.

8-4 ② Millwright set up chain fence around 706-C
Schach garden.

③ Armed Product tubes forms.

④ Removed PF 142 and cleaned at semiworks
and, filtered A9 - PF1 - A17. Prepared A17 for

1 hr. Jetted to A9, filtered A9-PF#1-A8. Should finish filtration by shift change. See instructions at PB-2.

- ③ Blowers continued laying pipe at S.B. outlet. Moved S.B. sampler one outlet east.
- ④ Continued evaporating. Raised pressure 5 psi.
- ⑤ Went cleaned B17 Pt probe to instrument shop. Replaced B17 probe with B1 probe. Works okay.
- ⑥ Will repair extension valve handle on cyclone separator tomorrow.

10/4/50

- 4-12 ① Finished up P^{32} evaporation in 906 Bldg.
 Sachs ② Boiled down T^{31} in Room 1D. All completed.
 ③ Removed $Ca(NO_3)_2$ slugs from V^{14} dissolver
 ④ Continued Evaporation on Tank Farm.
 ⑤ Continued with 706D Filtrations as per Blowers instructions. Status to 12-8 orally.

10-5-50 ① Ev. operating at 40 psi + 30"LL

12-8 ②. Status of P.F. Filtration:-

- Blood
 - Jetted soln. from A17-A9
 - Cooled soln. in A9 to 40°C
 - Filtered soln. A9-P.F.#2-A8. - At this point there appeared to be a vacuum leak in the P.F. Cubicle (excessive noise & gurgling of soln. in the cubicle). Discovered the leak at the bottom of ~~at~~ a weld on the inlet line going to the valve manifold

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- just below the disconnect to P.F. #2. Marked this leak with green chalk, but you will need a lantern to find it !! This maybe the source of some of the trouble here & the data obtained on this shift (and perhaps others) maybe of doubtful value. However, we did go on & get some data on the flow thru P.F. #2, but finally by passed soln. to A-8. Even the flow thru A9-A8 by pass - A8 appears to be about $\frac{1}{2}$ what it should be. - (Recorded data on this too). Soln. is now in A-8.

- ③ stored the B-17 probe parts on the glassware bench back at the ^{East}~~North~~ side of Cell B on ~~1st~~^{2nd} level.
- ④ Cleaned up the make-up room & decontamination room.

10/5/50 Ø Pb burners continued work at N tank from 8-4 valve pits.

Schaich ② continued work on S.B. outlet.

③ Blewins to EV and Lemons to FI.

④ Maintenance worked on P.F. cabinet leak all shift. Repaired leak. Started cleaning cabinet.

⑤ Emptied A8, A9 & A11. Weighed out and sampled 110# HNO₃ and 255# H₂SO₄. Also took 1 liter sample of tap water. Ready for mixing in A9 tank. See instructions at PB-2. A-9 has water in it.

- ⑥ Made up Gals - Gms of F.A. chart for All.
- ⑦ Continued evaporating.
- ⑧ Dressed shift with jackets.
- ⑨ Repaired cyclone separator valve extension handle.
- ⑩ Millwrights continued work on 900 stack area fence.
- ⑪ Carpenter put up tags at 706-D.

10/5/50

- 4-12 ① Proceeded with 706-D Bldg operations. Weld in Sacks P.T. cubicle seems to be O.K. Run looks at P.B #2
- ② A17 now air sparging until 12:05 a.m.
 - ③ Cottrell Precipitation went off three times and trips completely off at 10:30 p.m. Shut the whole thing down. Call shift electrician to see if he could start the thing up but he never showed up.
 - ④ Continued P³² run in 906 Bldg. Instructions passed on to 12-8.
 - ⑤ Continued evaporating. A new load of Feed showed a pH of 2 at 11:30 p.m. It might be necessary to bring 1" of stuff from W8 to W5.

10-6-50 ① Continued P³² Thru the column to #2 evap.

12-8 From Column head tank. Water wash now
blood passing thru column. Operated #2 "gold" evap.
all shift.

② Tank farm operations normal. Jetted 1" from W-8 to W-5 to compensate for EFT at

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PH of 2 at 11:30 P.M. 10-5-50.

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- ③ Continued Started up Cottrell Precipitator. It kicked out - so investigated operation further. - Found spray pump operating at 50 gpm.; then cut pump back to 30 gpm. as recommended at 35-40 KV. - No more trouble so far this shift.
 - ④ Continued operations at 706-D. Took Sample #6 A17b - Filtered thru A9-PF#1-A17 & recorded data. Jetted to A9 Cooled to 40°C, filtered thru A9-PF#1-A8. - Filter appeared plugged after a time & then bypassed to A8 - Note rate of flow thru bypass to A8 = ± 3 gal./min.

Note: The suction jet from P.F. to A17 is $\frac{3}{4}$ " jet. - The suction jet from P.F. to A8 is $\frac{1}{2}$ " jet. From data obtained, I am curious to know if we can filter as well thru P.F. to A8 as we can to A17? The amount of vacuum obtained in each case may account for the some difference in filtration rate from between A17 & A8.

- 10/6/50 ① Repaired A5-W12 jet at PB-1 and high 8-4 pressure steam blow down at PB-1.
- Schmid ② Sent ~~706-A~~ filtration samples to 706-A lab.
- ③ Repaired brake cables on pickup.
- ④ Instruments repaired PB 419-5 misnomer

- Took jaws of PB5-3 micromat to dry for repair. Jaws back in but shaft will have to be replaced.
- ③ Painters working on 706-D molding.
 - ④ Taggers working on radiator lines in 706-D.
 - ⑤ Two acid cartboys on E. Platform have bottoms out. Handle with care. Also watch H₂SO₄ cartboys.
 - ⑥ A8-A11 jet valve is leaking. Could not repair using PB.
 - ⑦ Placed filter acid calculation sheets at PB-2 desk. One in calibration book and another under plexiglass.
 - ⑧ Jettied A11 tanks empty, made up new HNO₃ & H₂SO₄ solution in A9, and started filtering thru PF-1. PF-1 plugged but open slightly when A9 solution heated. Finished filtering to A17, jettied back to A9. Filtering A9-PF-2-A8 at shift change at a temp of 60°C in A9.
 - ⑨ Made hot sink inspection.
 - ⑩ Continued evaporating.

10/6/54

- 4-12 ① The Cottrell Precipitator leaked out four sacks times during the shift. Finally got it running at 35 g.p.m and 30 K.V. Performance O.K. for the last three hours.
- ② Complete a P.T. Filtration and washes. Emptied all tanks and shut down Panel Boards.
 - ③ Toofe Toline came in to Dile Bldg.
 - ④ Continued Evaporating.
 - ⑤ Had shift electrician check 706-D vacuum

pump "mercoil" switch. It failed to turn the pumps off on one occasion. O.K. now.

closed.

10-7-50 12-8 H.B.

1. Vacuum pumps were running continuously again. Electrician checked them and cut one out and says the other one is working alright.
2. Continued with evaporator and tank farm operations.

10-7-50 8-4 G CP

Contained Ev at tank farms.

10-7-50 4-12.

ph of solution in W5 is about 10 but feed solution at the evaporator checks only about 4

Evaporator is running ok, no foam over.

10-8-50 12-8 H.B.

1. Continued with evaporator and tank farm operations.

10-8-50 8-4

Contained evaporator. at tank farm
Baked down Run #673 Started Run #674

10-8-50 4-12

Maint worked on vacuum pump & switch again. It still sticks occasionally and

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will have to have a new switch, which
they have ordered.

- 10/9/50 ① Electrician relamped N+5 stills and East
12-8 platform shed.
- ② All east platform high lights are out plus
two lights on 900 area stack.
- ③ Replaced A8-B11 jet valve.
- ④ W1 + W2 filling with H₂O all weekend from a
line hooked to air conditioning unit at 205
and draining into 205 roof drain.
- ⑤ Picked up 120 empty soda ash bags that
were scattered around W1 + W2 ???
- ⑥ Cleaned, measured, and sent R.P. rougher
pumps to shop for repairs. Looks like the
gears are shot. Took dry sample at R.P.
- ⑦ Made up 1st part of coating removal solution
with distilled water and cooled in Al.
- ⑧ Dumped acid for dummy run. M5 pump
needs packing. Valve is cut off between pumps
and HNO₃ tank to prevent leakage.
- ⑨ Repaired W1 & W2 steam traps.
- ⑩ Jarred mercury switch on ^{706-D} vacuum pumps
and they are working okay. (Part of the time)
- ⑪ Continued evaporating.
- ⑫ Brought Pile units to 902 Bldg.
- ⑬ Brought FI steels to 706-D

- 10/9/50 ① Loaded 130 x slugs to dissolve & started
8-4 dummy runs.
- Slam ② Electricians checked vacuum pumps &
clamped East platform high lights.
- East ③ Repaired R.P. and sampling pump by
drilling out pump shaft holes to prevent
falling of the shaft.
- ans ④ Maintenance removed forms from hole
in 706-d floor
- 205 ⑤ Removed both process filters & backwashed
at semi-works. These were loaded with esp.
black stuff & stainless steel scrap.
- at ⑥ Repacked 145 pump in make-up room.
- > ⑦ Maint. continued lagging steam lines
in tank farm.
- 11 ⑧ Millwrights installing manipulating arm
shield in final product cable
- sk ⑨ Maint. continued work on radiation fence
around 900 area.
- ton ⑩ Work continued on settling basin outlet
weir.
- r ⑪ Made up 20% Pb(NO₃)₂ - 20.4%
- 10/9/50 4-12 ① Continued Evaporating on Tante Farm.
- Sachs ② Checked Iodine dissolving in "C" Bldg.
- ③ Dumped 2 Cars of HNO₃.
- ④ Hosed down make-up room.
- ⑤ Dummy Run Status:
A1 - Batch A dissolving coming up to Sp. C.

10/10/50 ① Vacuum failure at 12 M.d. on 706-C FI dissolving
12-8 and 706-C & Schmid exposure draining line. Would
Schmid not come on by closing valve at 900 area manifold.

② Precipitator picked out ~~for a time~~ started back up.
Lowered water rate.

③ 706-D vacuum pumps need oil.

④ Checked FI dissolving.

⑤ Continued evaporating.

⑥ Dummy Run Status:

Pt 1 - Batch A diluted & cooling. Sp.G. got as high as 1.75. Ring balance is okay.

10/10/50

8-4 ① The following set valves need to be replaced. We
Sachs couldn't get them because the P.I.B.'s were in use.
A8-A5, A8-A5 DB, A11-A8, A11-A1.

② 4-12 shift note: The ~~like~~ A4 slide valve at the
steel manifold is shut. Some welding work on
Al made this necessary.

③ Steam turbines running until 4:10 p.m.

④ Dumped Sulfuric Acid.

⑤ Proceeded with dummy run. The extraction
was made and the P.I. Filtration is now
going through. Readings every 10 minutes. Check
with Blawer about the "B" batch dissolving.

⑥ Work continued on the steel area fence.

⑦ Instrument men worked on Al Sp. C.

difficulties all shift. Finally located a leak in
the line in the concrete plug. A new one
is being put in at shift change, but whether

10-1

4-12

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the instrument will be working at shift change, is doubtful.

- ⑧ Fabrication of column casings was continued.
- ⑨ The back-hammer bays are at it again. The objective is the remainder of west side of 706D concrete floor.
- ⑩ Continued evaporating on the tank farm.
- ⑪ C.F.-1 has not been backwashed.

10-10-50 ① Boiled down I³¹. Finished.

4-1/2 - ② Finished boiling down P³² - 906 Bldg.

Blood ③ Took cuts on Columns^{#3} at 706 C. - Continued work. - Column set to "drip" all night 12-8.

④ Ev. operations OK. - Had PH of 2 on EFT. Jetted 1" from W-8-W-S. - Then jet to EFT wouldn't work. - Backwashed jet line & dip-leg and jet started working again - at shift change.

⑤ Carried on work at 706-D - Passed on instructions to 12-8 shift. - Took sample 8 WWA at 11:45 PM. - Ready to start Metathesis as no sheet in run book on Batch A indicate.

10/11/50 ① AG agitator doesn't sound so hot.

12-8 ② East vacuum pump (706-D) needs oil & possibly shaft maintenance.

③ Continued evaporating.

④ Running Run Status:

A1 - Batch B ready to dissolve

A5 - SWCA
 A11 - SWMA
 A8 - SWCA & SWCWT sampled.
 A9 - cake (matheis)
 PF⁰² - Product cake.

10/10/50

8-4 ① Laborers poured concrete under the South end of Sacks the new 706D monorail.

② Pipefitter replaced A11-A8 and A11-A1 jet steam valves.

10-11

4-12

③ Painters started work on interior of evaporator.

B1000

④ Continued evaporating on Tank Farm.

⑤ Instrument men repaired B1 probe.

⑥ P.F.-A8 jet pulls 15" of Hg on Blower tank during A9-P.F.-A8 Filtration.

⑦ Head burners started placing lead brick around Resin Column Cubicle.

⑧ Instrument men repaired A1 Sp.G. instrument.

Are now replacing a bad A1 thermocouple. A1 should be operational at 4 p.m.

⑨ Took up Product cake and sent Product solution to B12 via A13. 4500 ml Product solution is now in B12. It has been sampled.

10/12

12-

⑩ Washed P.F. 2 with 5 ~~to~~ twenty gallon water washes. Semi-washes removed P.F.-2 and backwashed it. Very clean, P.F.-2 is now back in.

⑪ Backwashed C.F. -1

⑫ Filled all cell A tanks with the

exception of Al. Al has 300 lbs HNO_3 in it ready to start dissolving.

- (13) Made up 40% K_2CO_3 and 20% $Pb(NO_3)_2$. Samples are in the lab.
- (14) The Scale Hammers kept banging away.
- (15) Instruments replaced 1 thermocouple in A-1 tank.
- (16) Continued work on fence around 900 area stack.

cam 10-11-50 ① Lab. Anal. : $K_2CO_3 = 39\%$, $Pb(NO_3)_2 = 20.8\%$; respective
4-12 containers were labeled.

Blood ② Ev. Operations normal.

③ Finish I^{131} still. - Boiling down in Run 10.
There will be some I^{131} to be transferred to Run 10 also.

④ Took cuts on Runshaw's column. - set to "drip" thru 12-8.

⑤ P³² soln. passing from Column head tank thru resin column to Evap. #2. Cut off heat to Evap #2 and set to keep going till finished.

⑥ Dummy Run#2 status: - Al-Batch B dissolving.
- Sp. G. = 1.53

10/12/50 ① Replaced A9-A8DA & A9-A8DB jet valves.

12-8 ② Finished boiling down FI in Run. 10.

Schaeish ③ Shut down Precipitator at 7:20AM when high voltage failed.

④ Bottled K_2CO_3 to 40.0%.

⑤ Continued evaporating.

⑥ Run Status : 1/Al heel

All-Batch B cooling to 30°C
10/11/50 - M.T.

- ① Precat weighed & mixed in jacket by C.F.
 H_2SO_4 + dilute acid weighed out.

10/12/50

- 8-4 ① Continued Dummy Run Batch B. Five liters of
Sachs Li_2CO_3 are digesting in A8 until 4 p.m. A8 contains
 HNO_3 solution to ~~neutralize~~ neutralize metathesis
waste.

- ② Checked BIO-A5 line for leaks. O.K.
③ C.F.-1 has not been backwashed.
④ Lead Burners continued placing shielding in Resin Cubicles
⑤ Tempered B2 and cleaned with 2-4 liter Pb
removal washes
⑥ Wolfe continued on the 900 ~~area~~ stack area fence.
⑦ Painters continued work at Evaporators.
⑧ Continued Evaporation on tank farm.
⑨ Outlet weir at Settling Basin tied in & completed.

10-12-50 ① Evap. operations normal.

4-12 ② Finished Russel's soln. at 909 Bldg.

Blood. ③ Watched Rimshaw's Column. - set for the nite.

④ Continued work on I^{131} in Rm. #10.

I^{131} is in the sterilizer.

⑤ C.F.#1 has not been backwashed.

⑥ Dummy Run #2 Status:-

(a). Finished 2nd Metathesis

(b). Dissolving up Metathesized Product cake
from P.F. & Finished 2nd Transfer from

10/
12

10/
13

8-
Dec

- A9 to B12.

(c) Red Ready to continue with step #27
page #40.

(d) A8 - 8WCWB. soln. - Sampled. Ready to go to A5.

(e) A17 - 8WMB. soln.

(f)

① Removed $\text{Ca}(\text{NO}_3)_2$ slugs at Cell II - 205.

10/13/50 ① Cut back voltage on precipitator. Would not 12-8 stay on at 50 KV.

which ② Brought 30# K_2CO_3 from stores.

③ Finished transfer from A9 to B12 and sampled B12. Took A9 rins sample.

④ Emptied A8, washed with 2-40 gal rinses, and jetticed A17 to A8. Sampled 8WMB and shut down PB5. Jetticed A5-W12.

⑤ Backwashed CF #1.

⑥ Made up 20% $\text{Pb}(\text{NO}_3)_2$ & 40% K_2CO_3 . Sampled in lab. — $\text{Pb}(\text{NO}_3)_2$ - 20.4%, K_2CO_3 - 40.6%

⑦ Both pickups batteries are ~~shot~~.

⑧ Brought FI₁ to 706-C addy.

⑨ Continued evaporating

⑩ Shift attended fire safety movie & demonstration.

10/13/50

8-4 ⑪ Painting of the evaporator gallery was continued.

9-4 ⑫ Continued Evaporating on tank farm. Had trouble with the W5-EFT jet. Had to backwash the dip leg with water to get it going again.

⑬ Dumped ~~three~~ drums of metal waste from 706 HB into W7.

- ④ Pipefitters replaced the automatic W12-W5 valve.
 ⑤ Some wooden steam poles were pulled down
 on the tank farm.
 ⑥ the North Hot lab hoods were tied into the
 900 stack at 1:30 p.m.
 ⑦ Work continued on dismantling of the old
 caustic shed at W10.
 ⑧ Resampled B12 product and SWMB from
 Dummy Run #2.
 ⑨ 1

10-13-50 ① Cleared up 706-D Bldg.

4-12 ②. I^{131} dissolving started. - Had to remove
 Blood some waste from I^{131} Cell dissolver
 to W-5 by Truck.

③. Evap. operations normal.

④ Obtained 1-carboy of H_2O_2 from acid
 storage platform for I^{131}

10-14-50 Continued Evap. at tank farm-

12-8 Took Readings on I^{131} in 706C vault
 w/ off for 2 hrs. and could not
 get a reading it is still running

10-14-50 8-4

Called maint. to check mercosil switch
 on vacuum pumps again, seems to be
 working OK at shift Change.

4-1

10-19

10-

12

10-

10-15

10/1

13-

50

10-16

8-4

B100

4-12 1-DUMPED RUN # 680 AT EV2D.

10-14-50 2-Started Jet W-8 TO W-5 AT 8:30 PM.

3-UNABLE TO GET W-5 TO E.F.T. JET TO WORK
AFTER FLUSHING BACK SEVERAL TIMES.

10-15-50 Check HEEL dissolving on 1131 m C Bldg
12-8 could not get jet from W-5 to EFT
to work the solution W-5 is to HAT to jet
W-8 to W-5 jet is on.

10-15-50 8-4

10-15-50⁽⁴⁻¹²⁾ 1-Continued with TANK FARM EV2D.

10/16/50 ① Took I¹³¹ canister to Pile Bldg and brought a load
12-8 of slugs to 706-C Bldg.

Tasks ② Make up Run books for Dummy Run #3 and
First half of coating removal.

③ Removed Ca(NO₃)₂ slugs from C¹⁴ dissolver.

④ Brought Pile units to 902 Bldg.

⑤ Started a heel dissolving on I¹³¹ dissolver.

⑥ Continued Jetting from W8 to W5

⑦ Continued Evaporating on tank farm.

⑧ Pile Bldg is dropping a lot of water to W1 and W2
from the Fan house.

10-16-50 ① Lead burners continued work on R.C.

8-4 ② Evaporator operating on batch runs. (Run a
blood batch in and boil down.) EV-W6 steam blow
out line is being replaced as per H.P.
recommendation.

130

- ③ 3rd Dummy Run started. 130 x-slugs 181
dissolver. - 2nd wash of 2nd Coating
removal is in A1.
- ④ Put 2 - 4 liter rinses thru B-12 - (25% HNO₃
+ 200 ml H₂O₂)
- ⑤ Maint. finished wiring job on pumps in
make up room.

10/16/50 ① Opened damper (behind 900 area filter house)
west
4-12 for N. & S. hot fab hood ventilation. It is
behind just barely cracked open.

② Received four seals into W1 & W2 but the
volume was so great we had to drain while
receiving. Assumed both tanks full in calc.

③ 105 ready to send some more seals on 12-8.
If they do, get them to EFT and run them EV.
If things get out of control, send W1 & W2 to S.B.

④ Shut down Presley's column per instructions.

⑤ Finished boiling down P32 at 906.

⑥ Checked acid boiling in FI cell.

⑦ Cleaned out make up room pit and replaced
grill. They are not finished in the E. corner.

⑧ Maintenance finished work on EV-W6 blowout
line.

⑨ Neutralized and jettied 80M B & A9 line to
W9.

⑩ Dumped acids. tank status: A1 - batch A
dissolving.

10/17

12-

Sec

10-17

8-4

B10

- 10/17/50 (1) Continued Dummy Run #3. Extraction on Batch 12-8 A is now being filtered through P.F. 2. to A17. Jet starts on at 7:35 a.m. Batch B dissolving now in progress.
- (2) Continued Evaporating on tank farm.
 - (3) Watched I¹³¹ acid boiling.
 - (4) Dropped the Cottrell Precipitator from 40 K.V. to 38 K.V. in order to keep it running.

10-17-50 (1) Maint. repaired gasket on the reducer pilot valve at Evaporator. Painting was also continued here.

(2) Evap. operations - operating on "batches" yet.
- The EFT was filled from W1-W2 which is practically H₂O. Then the next run will probably operate on automatic feed.

(3) Ran steam engines for 4 hrs.

(4) The inlet weir along the SB walk was being cleaned out.

(5) Maint. was preparing to pump out mud from the diversion box. -(Not done at 2:30 PM)

(6) Dummy Run #3.

(a) -Continued dissolving batch B.

(b) -Finished Batch B - and jetted to A11.

(c). Pre-coat mixture was made up for the Crud filter.

(7) W-8-W-5 jet is finished. Steamed line for $\frac{1}{2}$ hr. Then started W-6-W8.

10/11

12-

See

- 10/17/50 ① Cut water flow & H.V. on precipitator back 4-12 until she finally started running.
- Schairch ② Continued evaporating using w1 + w2 for feed. Emptied w1 + 2 and read values for w5 - EFT. Mept EFT from w5.
- ③ Run No 689 at EV gave very peculiar results. The EFT sample was twice as hot as final EV. The samples were labeled correctly.
- ④ Run w6 - w8 jet all shift.
- ⑤ HNO₃ and carbogs are coming thru with no markings again.
- ⑥ Run status: 199 - extraction filtration
1911 - SWMPA
- ⑦ Did not check leak in PF due to FI.
- ⑧ Backwashed CF #1.
- ⑨ About 7:30 PM, FI off gas failed and all manometers blew. Trouble was finally traced to plugged instrument line. Blew open with steam but UV & solution backed into line. Used maintenance, F. King, Schaper, + Schairch's exposure removing line. Cleaned up a spill but could not check because of high background. F. King will pass on instructions.
- ⑩ Checked all lines in 900 area but could find nothing to account for sharp rise in L.L.
- ⑪ Finished foiling down P³² at 906.
- ⑫ FI dissolving still going.

10-1

8-

B10

- 10/14/50 ① Continued Dummy Run #3. The Product scale is
 12-8 now on P.F. -2 and ready to be removed with HNO_3
 Sacks solution and sent to B12. SWCR is in AS sampled.
- ② Put lead around hot lines on North wall of
 I^{31} cell, scrubbed up floor in front of Panel Board.
 Also checked dissolving.
- ③ Continued getting from W6-W8.
- ④ Continued Evaporating on tank farm.
- ⑤ Couldn't spot the scale in P.F. outside this shift.
- ⑥ Added 2 liters of H_2O to Iodine scrubber in order
 to get off gas back on dissolver.
- ⑦ Took Hot cap containing pipe from FI cell to
 burial ground.

- 10-19-50 ① Evap. operating on batch basis. EFT Filled
 8-4 from W-5. New batch started.
- Blood ② Maint. pumped mud out of the D.B. to
 S.B.
- ③ Lead burners continued work on R.C.;
 likewise did the millwrights.
- ④ Instr. Maint. reconditioned Al Ring Balance.
 Also taped & glyptaled all welds in Cell A
 to Al Instrument. Still working on the Instrument.
- ⑤ The leak in P.F. inlet from A-9 was found
 on bottom of weld on "T" joint. Welders
 were working on it at 3:40 P.M. - Repaired 4:00 PM
- ⑥ #3 Dummy Run Status.
- A5 - Neut. Batch A.
- A8 - Batch B.
- A9 - A9 rinse

B-12 - 7.6" Product.

10/18/50 ① Poured empty $\text{Ca}(\text{NO}_3)_2$ slugs from AlI I dissolver.

4-12 ② Brought FI slugs from pile to 706-C.

Schach ③ Checked acid boiling in FI dissolver.

④ Added HNO_3 acid to tygon line connected to hot line at FI cell. Drained line once and put in push solution. This stuff was hot. Keep adding acid until it breaks down. Then wash with H₂O.

⑤ Continued boiling down FI in Run 10. 12-8
there is still some in the cell.

⑥ Cleaned up hot spot at FI panel board.

⑦ Running D32 thru column into final EV at
906. Do not boil down. Run at 15 drops/min.

⑧ Neutralized 8WMA and jetticed to W9. Sent A9
rinses to A8 and rinsed A9 tank. Blow two gals
water thru each P.F. They are okay. Made up
1st coating removal solution and added 1st
part to A1. Stopped at this point because A1
instrument did not check.

⑨ Made up 40% K_2CO_3 + 20% $\text{Pb}(\text{NO}_3)_2$. Samples in lab.

⑩ Made up dummy Run #4 books.

⑪ Continued batch evaporating.

⑫ Checked A5 + A6 Sps. G. with hydrometer. Both
samples gave 1.24 while readings were 1.18

⑬ Sp.G. of solution now in A1 should be 1.28.

⑭ W6 to W8 jet going all shift.

10/19

12-

Sac

10-19

8-

Blco

10/19

4-

Sch

10/19/50 ① Getting fuming HNO_3 out of I^{"3"} dissolver, washed 12-8 out twice, loaded 8 slugs, and started dissolving.

Sachs ② Completed I^{"2"} evaporation in Room 10.

③ Checked Pb^{3+} running through final column into cold lined evaporator. All through at shift change.

④ Continued Evaporating on T.F.

⑤ The W6-W8 jet quit once. Let jet cool and started up again.

10-19-50 ① Maint. Continued work on R.C.; ~~ie~~: Leadburner, 8-4 millwrights & Carpenters.

Blood. ② Electrical Maint. Continued work on electrical switch board on W-Wall of 706-D.

③ Started jet again W6-W8 - still jetting.
Evap. operating on batch basis.

④ Instr. Maint. Continued work on A1, A5 & A6 Instruments. A1 Instrument Sp. G. checks well. Sp. G. of A1 Tank at 3:30 P.M. = 1.251

⑤ Dummy run status - same as 8:00 AM - 10-19-50.

- 1st part of coating removal soln. still in A1

K_2CrO_4 soln = 39.4%

$\text{Pb}(\text{NO}_3)_2$ soln. = 20.8%

10/19/50 ① removed C^{"4"} slugs from dissolver.

4-12 ② checked dissolving at 706-C.

Schmid ③ Boiled down Tedde's stuff all shift. About a liter to go at shift change.

④ 706-C hot sink has leaking knee valve.

⑤ W6 to W8 jet stopped at 5:15 PM. Kept trying to get it started. Finally started at 11 PM.

- ① Continued batch evaporating.
- ② Dummy run - same as (8-4).
- ③ EFT has 14" W5 feed and the rest from W1 + W2.

10/20/50

- 12-5 ① Continued Evaporating ~~on tank farm~~ on tank farm.
 Sacks ② Proceeded with T¹³ run in "C" Bldg.
 ③ Boiled down Ladd's Calcium in 907 Bldg to a thick
 syrup. On cooling off the stuff seems to have
 solidified
 ④ The W6-W8 settlement all shift.
 ⑤ The liquid level of Blg is 7.7"

10-20-50 ① Elect. Maint. Continued work on W. wall switch
 8-4 board - 706-D.

Blood. ② Cleaned Blg with 2-4l washes of 25% HNO₃
 + 200 ml. H₂O. + then washed again with H₂O.

③ Cell A Status:-

A1 - 1st part of Coating removal for next
 Dummy run.

A8 - 8WMB - #3 Dummy Run.

A6 - Water for checking Instrument.

④ Inst. Maint. worked on A1 + A6 Instrument.
 A6 looks good. A leak in the long leg of A1
 liquid level was repaired. The leak was on
 the inside of A1 tank. ~~still checking at~~
~~shift change~~. A1 - OK at shift change.

⑤ Maint. poured Concrete for 706-D floor.

- ⑥ Evap. operating on batch basis. - Had some trouble with foaming at 25 psi & 1.34 sp. G. W-6 → W-8 jet is still going.
- ⑦ Painting was continued at the evaporator.
- ⑧ S.B. outlet collection box was finished except for installation of sampling device.
- ⑨ Changed all Tygon tubing on automatic samplers. Also A.F. addition

10/20/50 ⑩ Packed two FI products at Am 10 & delivered to 4-12 902.

Shaind ⑪ Steamed plugged line at 706-C all shift. No success. Shut down equipment.

⑫ Sampled Preusey's column twice. Rept cut at 11A.M.

⑬ Checked all hot sides and W12 seems to be under control. There is a stream of H₂O going into W1 and 205 is trying to find the source no success as yet.

⑭ W6-W8 quit at 5'-8". Steamed line and closed valves.

⑮ Continued operating batchwise. EFT has water from W1 + W2 in it.

10-21-50 12-8

Changed bottle at Preusey's Col. at 12.50
4:10 + 7:15 AM

Called main. again to check marshall switch on 706-D vacuum pump, no report at 7:30 AM

over

10-21
'50
B10

jetted W12 at 7:35 AM

10-21-50

- 8-4 1- STEAM SHUT DOWN FROM 8:30 A.M. TIL 1:15 P.M.
 2- CHECKED STILLS IN 500 AREA AND 706-D OPERATING
 INGOK.
 3. NEXT CUT ON PRESSLEY'S COLUMN AT 4:15 P.M.

10-21-50 4-12 H.B.

1. CONTINUED TANK FARM OPERATIONS AND EVAPORATOR
 2. NEXT CUT ON COLUMN ONE AROUND 1:00 P.M.

10-22-50 12-8

Took cuts on Pressley's Col. at 1, 4 & 10/2
 7:AM

8-1

Sah

- 10-22-50 1- CONTINUED WITH PRESSLEY'S COLUMN, NEXT CUT
 8-4 AT 4:15 P.M.
 2- DUMPED RUN #704 AND SECURED 705 AT THE EV.
 3- DELIVERED TEN SULPHUR CANS TO 105 BLDG.

10-22-50 4-12 H.B.

1. CONTINUED TANK FARM OPERATIONS AND EVAPORATOR,
 2. TOOK CUTS ON PRESSLEY'S COLUMN AT 4:20 P.M.
 7:25 P.M. AND 10:00 P.M.

10-23-50 ① Emptied I^{131} disolver. Washed with 7/16 liters H_2O
12-8 Took I^{131} Carrier to Bldg. 105. + emptied.

Blood ② Evap. operating on "batch" method. Still foaming.

15 P.M. ③ Cleaned up around vacuum pumps over
operated hot labs. 706-D. Also cleaned up 706-D
decontamination room.

PM. ④ Started dummy run #4. 1st Coating Removal.
Finished - 2nd Coating removal cooling &
ready to start H_2O washes. H_2O weighed out.

metag ⑤ Continued sampling Pressly's column. Last
sample started at 7:25 AM.

⑥ Delivered "Pile Units" to bldg. 902.

+ 10/23/50 ⑦ Checked the following lines in cell A.

8-4 A1 + A6 solution addition

Schmid A1-W12 A5-A6

cat A6-W12

A6-W9.

⑧ Checked A6 L.L. It is okay.

⑨ Labours dug out hot dirt and sent contaminated
soils from E. side your ramps to B.G. carpenters
replaced ramps.

⑩ Millwrights reconditioned W. Vac pumps. Working
on E. pump at shift change.

⑪ Sample all dry wells on T.F.

Results: W5-0 W11-29 W2-3793

W7-2 W8-7 W3-168

W9-154 W6-15 W4-93

W10-176 W1-63

- ⑩ Poured concrete between N & S hot lab and product cubicle.
- ⑪ Settled w₁ + w₂ to EFT.
- ⑫ Materialized 8WMS D.R. #3 and sent to ~~BB~~^{A6}.
- ⑬ Instruments working on A5 ring balance.
- ⑭ Continued tearing out T.F. fence.
- ⑮ Added green dye to w₂. ~~Not~~ Negative result. Added potent blue dye. Negative results at shift change.
- ⑯ Right rear inside tire on 1½ ton truck is flat. Garage will repair if you take it down.
- ⑰ Brought B3 pipe from BG to 706-D.
- ⑱ Sent hot pipe from dec. room to BG.
- ⑲ Continued evaporating using w₁ + w₂ feed.
Running at 30" x 45#
- ⑳ Run Status: A1 - Ready for dilution

10/23/50

- 4-12 ① Were unable to find the source of flow into Sacks w₁. Checked everything in 205 area. Shut off underground "T" ~~but~~ handled valve on water line to Carbonate make up tank but this didn't stop flow into w₂ drywell. The drywell contains no blue dye while w₂ still has plenty in it.
- ② Continued Evaporating on tank farm.
- ③ Sampled w₂ at 11:00 p.m.

④ Dummy Run Status:

A1 - Batch B dissolving

A9 - Batch A extraction digesting until 12:00 p.m.

- ⑤ Checked Iodine dissolving. Everything O.K.
 ⑥ Diluted 1MA checked 1.5225 p.C. with hydrometer
 Ring balance was 1.53. Also 390 lbs HNO₃ checked
 perfectly with Ring balance on Batch B dissolving
 ⑦ Shut off batch evaporation in 907 B(bq).
 ⑧ Shut off Shields Recorder in 905 B(bq) at
 6 p.m. as requested.
 ⑨ Checked following: lines in Cell A. They are O.K.
 Al sampler, Al solution addition, Al - All, All to C.F.,
 C.F. to A17, A18 inlet and outlet H₂O.

10-24-50 ①. Evap. operating fairly well on batch basis -
 12-8 25# steam.

Blood ②. Sampled W-2 + W-2 dry well:-

$$W-2 = 69$$

$$W-2 \text{ Dry Well} = 3.48 \times 10^5$$

③. Took I¹³¹ readings. -(They look normal.)

④. Dummy Run #4 Status:

(a) Finished batch "B" dissolving, diluted in
 Al & Cooling.

(b) Batch "A" filtering from A-9 → A17 thru P.F. #1
 nearly finished — started filtering at
 12:45 AM thru P.F. #2. P.F. #2 plugged after
 about 3/4 hr. - Tried several backwashes
 of H₂O. thru the blow tank to A9, not
 very successful. Switched to P.E. #1 with
 about 35 gals. to go; but it plugged and
 stop. filtering. Tried 1 gal. H₂O wash backwash
 and then simply blew the cake off
 the filter with air every 10 min. - Air

seemed to work about as well as H₂O! 10/2
 So we used air from here forward for 4-1
 blowing back to A9. Soc

10/24/50 ① repaired EV-W6A valve. Pin had digging
 8-4 out.

② Ran steam turbines 4 hours.

③ East vacuum pump running. West pump
 down for repairs.

④ Made up K₂CO₃ & Pb(NO₃)₂. Pb(NO₃)₂ sampled
 K₂CO₃ not.

⑤ Using EV feed from W1 & W2. When getting
 from W2, shut off 205 valves at Group I.
 It backs up into coll I if you don't.

⑥ Running EV at 30" and 50 psi.

⑦ Found leak in W2 line between W2
 plugcock and W2 tank. W1 plugcock is
 open, W2 closed. Turn S.S. tops off till
 labourers clean out pit.

⑧ Replaced tire on 1½ ton truck. Also got
 antifreeze.

⑨ Checked all lines at 205 + 205 tank. Nothing
 unusual.

⑩ Semi-weeks unplugged P.F.s.

⑪ Continued painting EV.

⑫ Run States Alt-heats.

A 5 - Next batch A

A 11 - Crad fitting to A17

A 8 - Wades

A 9 - Washing with 20 gal. vines.

10-2

B10

12-

10/24/50 ① If someone finds D.L. Rausang's Community Chest
4-12 card, would they please put it in my box. Seems
Sacks to have gotten lost.

② Continued Dummy Run. The extraction P.F.
Filtration went for most of the shift and is still
going. Blowing in P.F.-2 back with air every thirty
minutes or so at present but can't get over 0.3 gal
per minute.

③ Boiling down P^{32} in 906 at shift change, should
just about be done at 12:00 p.m.

④ Continued Toluine Run at Cell and in Room 10.
Boiling down in Room ~~10~~ 10 at shift change. Status
verbally to 12.8.

⑤ Continued Evaporating on tank farm. Filled up
one foot tank with W1 and W2 contents. Now
boiling down Run after finishing up another feed
tank from W5. Ready to go back to batch operation.

⑥ Cleaned up area around Toluine Cell and put
down new paper.

⑦ Before starting present P.F. filtration, Ag was
cleaned with 4-20 gallons washes, then setted to
 $A_8 \rightarrow A_5 \rightarrow W_{12}$. A_8 washed out with 100 gal H_2O
and sent to W_{12} .

⑧ Analysis - K_2CO_3 39.8%

⑨

10-25-50 ① Removed $Ca(NH_3)_2$ cans from C^{14} dissolver.

② Finished boiling down Crude P^{32} .

Blood ③ Started I^{131} thru glassware Rm 10; but after
12-8 the I^{131} was product was brought into the flask
from the evaporator and $KMnO_4$ added,

the soln. turned a dark green color. (?)
stopped here.

④ Evap. operating at 45# steam; automatic feed from W-5. At 45# had a foam-over at boiling down point; however at 40# there was no foam over to the end point - for the previous batch.

⑤ Dummy Run #4 status:-

(a) A9 - Batch "B" 1st Metathesis. Filtered ready for 2nd Metathesis.

(b) A8- 8WC 1st Metathesis.

Extract' Batch "B" filtered very slow. Used both P.F. 1+2 - Blew back to A9 with air about every 10 minutes. - Put 4 water washes (33#) thru blow tank - P.F.#1 to A9 and filtered back to P.F.#2 so that the extract cake would be on P.F.#2 for addition of K_2CO_3 soln. Put 1. water wash thru A9 splash plate. The 1st metathesis soln. filtered very well in comparison with the "B" extract.

10/25/50 ① Automatic samplers are out due to electric
8:44 shut down at 5:5.

Schaeck ② Samplers started work on W2 line.

③ Checked all sight for flow into w1 + w2. No luck. Seems to be coming from 205 but still flows when H_2O and steam are shut off.

④ Continued evaporating 30" + 40 psi.

⑤ Run Status: B120 - product sampled.

10/2

4-

500

10-26

12-

B100

A8 - 8 WMC sampled.

A9 - 44 more "

① Instruments worked on B12 probe seems to be working now.

② Shaped & King to fit half a shift.

③ Wist vacuum pump to shop for repairs.

10/25/50

4-12 ① Smeared 205 slug changer and reashed Ready Soaks for resmeared by H.P. on 12-8 shift.

② Sampled eleven manholes looking for high D.B. reading - but had no luck. Highest count was 91 and was pulled from manhole just south of the new manhole.

③ Continued evaporating on tank farm. Filled up feed tank twice from W₁ and W₂. They are now ready for fan seals from 11c Bldg.

④ Checked Iodine dissolving in C Bldg.

⑤ Finished up I^{131} ~~dissolving~~ run in Room ten, removed product to 902 Bldg and sampled.

⑥ Hot off gas precipitator went off about 10 p.m.
Snapped it back on.

⑦ Put a liter of hot H₂O in I^{131} scrubber to cure dissolved off gas ill.

10-26-50 ① Evap. operating fairly well. 30" L.L. - 40# steam.

12-8 ② Took I^{131} readings. Turned off steam to Blood let temp. fall to 90° - Then turned steam back on but the gauge gage did not register - and therefore did not further

regulate.

- (3) Rewashed the Hanford slug charger in 903 two times. - still hot on the bottom.
- (4) No seals from Pile attempted.

10/26/50 0 Sent pickup thru safety lane and added 8-4 antifreeze.

Schmid (2) picked up all overhauls around "D" Bay and cleaned up E. Platform.

- (3) Cleaned out decontamination room and make-up room jet.

(4) Brought H_2CO_3 & $Pb(NH_3)_4$ from stores.

- (5) Replaced steam valves at W6 + W8 and water valve at W5.

(6) Painter lettered 705-0 practical P.C.

(7) Unplugged 3rd level drains.

(8) Repaired W12 automatic jet.

(9) Labour continued work at W2.

(10) Painter continued work at EV.

(11) Receiving fan seals into W1 + W2 at shift change. Turning into EV.

(12) Continued Evaporating.

10/26/50

- 4-12 (1) Dumped one and one half Fan seals from W1 Sack and W2 to settling basin. test results showed 149 and 556 counts respectively.

(2) Continued Evaporating on tank farm. Now operating normally. From W5 at 30" L.L. and 40# pressure. tried running Exp. L.L. up, but conductivity recorder started moving up the

10-2

12

B10

10/21

8-

Sch

scale at 31" so we cut it back.

③ Followed Orr's instructions on the I¹³¹ work.

Dissolver is now ready for 12-8 slug loading.
Alcohol can be rinsed out and put on E. Platform.

④ Continued I¹³¹ still work and Evaporation in Room 10. Still some to boil down at shift change.

⑤ Pile B1dg. Filled up fan seals this evening.
They will be dumped sometime on day shift tomorrow.

⑥ Emptied B12 (D.R. #4 Product) and put two lead removal solutions and one H₂O wash through. Sent it all to W12.

10-27-50 ① Evap. operates fairly well at 45# steam; but 12-8 had 1 foam-over at Sp. G.=1.30 - Now operating Blood at 40# steam + 30" L.L. At 40# steam we had no trouble.

② I¹³¹ status:- Loaded 8 slugs in dissolver.

- Finished coating removal.

- Started dissolving at 110°, cut off steam and now coasting on its own.

- Finished evaporation in Rm. #10 and turned in F-1 Sample.

10/27/50 ① Painters continued work at EV.

8-4 ② Carpenters continued work on 106-D doors.
Schaeck ③ Tailors continued work at W2.

④ Sampled all manholes.

⑤ Continued evaporating.

⑥ Made hot sink inspection

- ⑦ Received Chicago truck with 6 drums. all
into W5.
- ⑧ Shift attended. A. went movies.
- ⑨ Received two fan seals into W1 & W2. Samples
are in the lab.
- ⑩ Marks results:

900 area - 397	205 - 103
S of EY - 146	Some rocks - 7
W1 & W2 - 116	706 A - 4
706 C + D - 108	105 - 2
	706 HB - 2

10/27/50

- 4-12 ① Cleaned up six Chicago drums in 903 Bldg.
Sacks H.P. has smeared them, but the smears have
not been counted.
- ② Cleaned up around I¹³¹ Panel Board. Used
 HNO_3 on floors. Put down new paper. Took
hottest hot caps to B.C.
- ③ The Evaporator has got a severe case
of foamatus. The worst symptoms appear
appear when boiling down from 1.3 to 1.4 Sp. G.
Also 40# appears to be too much pressure.
Suggest you go to about 1.26, then boil
down Evr to a l.h. of 20" and dump the run.
Better check with H.B. tomorrow on day shift.
- ④ Pumped two fan seals from W1 and W2
directly to the Settling Basin.

12-
10-288
10-
No10-2
4-1

10-

10-2

10/30/

12-

Satur

12-8 1. Continued with tank farm ev.
 10-28-50 2-Had maine. To pick up 10 gal of kerosine at
 oil stones.
 3. Lessons on 2^{1/3} all shift.

8-4

10-28-50

H.B.

Note - All drums are OK on Beta & Gamma.
 All still hot on Alpha.

1. Continued tank farm and evaporator.

10-28-50 Continued EV at tank farm. 20# press.
 4-12 30" LL.

10-29-50

8-4

H.B.

1. Continued evaporator and tank farm operations.

10-29-50 4-12 GCP

Continued EV at tank farm.

10/30/50 ① Used shift exposure time removing hot
 12-8 lagging and swabbing lines at FI all.
 Schieck brought readings from >10R to 2R.

② Continued fuel dissolving

③ Wash and smeared 5.5 drums twice.

H.P. counting. See next page.

④ Brought file units to 902 Bldg.

⑤ Continued evaporating

⑥ 75HP pump is out.

Drums Nos. NC-50 & NC 10₁, are okay.
+NC-7

The other ~~three~~ were cleaned at 7:30 AM. Have
not been smeared. All x contamination

10/30/50

- 8-4 ① Cleaned up and hosed down 900 stack area
Sacks ② Renewed two orders from Chicago. They
have been smeared.
- ③ Now running the 706D west vacuum pump.
It's hours all week.
- ④ Painters worked at Evaporation.
- ⑤ Laborers kept digging at the W1 and W2
decommission box.

10-30-50 ① Loaded 4 steel drums passed by H.P. on
4-12 trailer-truck and took truck out of 903.

Blood ② Unloaded acid bottles out of contaminated

Cases: S12 C 12983

S12 C 12972

S50 C 1259

S12 C 13147

S12 C 12542

S12 C 1154

Took MT cases to
Burial Ground. Did not
have time to wash
MT. bottles setting by
903 entrance.

③ Evap. operations normal. Still having some
trouble with foam-overs.

④ Started decontaminating I-Cell interior.

At start top read: 400 Mr/hr. at end: 200 Mr/hr.

side door: 2½ R/hr.

1 R/hr.

4 in - Top of Dissolver: 30 R/hr.

15-20 R/hr.

Followed instructions by P.B. Orr.

⑥ Lift a 220 V 3 ϕ jumper from 706-D electrical P. Board to I¹³¹ Cell.

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⑤ The Scopes for I¹³¹ are in the decontamination Rm 706-D. - So is the Lead brick support for the side door. They are hot.

10/31/50

12-8 ① Continued decontamination of I¹³¹ cell. Followed eachs instructions on P.B.'s sheet and kept repeating process. Put down new paper around the Panel Board.

② There is something wrong with the South Vacuum pump in 706-C Bldg. Sounded and smelled like bad belts. Turned on North pump and shut down the South one.

③ Continued evaporating on Tank Farms.

④ C.P. reading on side door of Iodine Cell was 1R at 7 a.m. with Cutie Pie shaved in as Far as we could get it. Top hole reads about 250 m/hr with C.P. about 12" down in hole.

10/31/50 ① John Walker to decontamination in 902
8-4 all day started

Blauer ② Bailey decontaminated on scopes + lead brick support in 706-3 decontamination room
③ Used exposure time removing lead brick from cell in 706-C

④ Maintenance dug out line from Diversion box at W₁ & W₂ to W₂

⑤ Maintenance installing new fencing North Side of South Tank farm

⑥ Maintenance shut down the West Vac. pump in 706-D to repair oil leak. East Vac. pump

now running.

⑦ Tried to run evap. batch wise. No improvement or favours & much slower than running continuously.

⑧ Ran ^{both} steam turbines 4 hours.

10-31-50 ① Finished Pressley's column in 908.

4-12 The large peak came off, but it didn't go back to second scale and another peak started coming off. - Shut down at this point.

② Still boiling down P^{32} at Crvd evap. 906.

③ Called H.P. to have bottles smeared at east outside wall of 903.

④ Continued Evap. on tank farm. - (About the same.)

⑤ Decontamination of I¹³¹ Cell still in progress.

Used HNO_3 - $KMnO_4$ - Then $NaOH$ & soap & steam for 2½ hrs. - Then $C_2H_2O_4$ ^(oxalic acid) ready to wash off with H_2O .

— where we had 30 R/hr.; it is now 5R/hr.

Catch tank activity was reduced this shift from 10×10^9 to $3\frac{1}{2} \times 10^9$.

— Step #5 is next for inside the vessels.

• 11/1/50

12-8 ① Continued Iodine Cell decontamination. Used Sachs chemicals and steam all shift. No hosing done due to bad state of W5. Had H.P. survey cell at 5 a.m. General background was 150 mR/hr. The hottest spot was 4500 mR/hr. on cell wall.

behind the dissolver. Concentrated our efforts there for the remainder of the shift but had no exposure time to get any more reading.

- ② Boiled down P^{32} in 906 Bldg.
- ③ Continued Evaporation on Tante Farm. Cut off feed at 1.26 and boiled down at 40° until reaching at h.h. of 20" in Exp and then dumped run. No foam overs this shift.

11/1/50 ① Maintenance completed work on the West B-4 vacuum pump & are now tearing down the East Blower vacuum pump.

- ② The line from W₁ + W₂ diversion box to W-2 is now unboxed. Waiting for space in W-5 before testing for leaks.
- ③ Bailey to decontamination bldg all day.
- ④ Ran the evap. at 50° ± 30% L.C. to a sp. gr. of 1.30. It passed at 1.34 during boil down & scrapped the run at 1.34.
- ⑤ Worked on decont. of scopes & other 706-C stuff in 706-D decont. room.
- ⑥ Ran the second evap. run at 40° ± 30% L.C. to a sp. gr. of 1.27. And then boiled down. It ran well.
- ⑦ Millwrights working on 706-D loading cubicle liner.
- ⑧ Had to dump W₁ + W₂ to the S. Basin. Highest count was 6.95 c/m/ml.

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11-1-50 ① Finished work on Pressly's column. Activity
4-12 peaked came off & it was shut down 11:15 P.M.
Blood ②. Evap. operating fairly well. (When it foams
we dump the run.) 40# steam. 30" L.L.
③. Continued decontaminating I¹³¹ cell.
start of shift:- Gen. BKg. 1R/hr. -

East Wall 5R/hr.

South Wall 2.5R/hr.

After using strong NaOH soln., soap & steaming
for 3½ hr., there was not much change in
the above readings. - So applied HNO₃ and
steam. starting steaming at 10:30 P.M. - still
steaming now.

The dissolver and 1 condenser was
removed at the first of the shift by maint.

④. Decontamination I¹³¹ Cell parts was continued
at 706-D. The lead brick look pretty good.
The rest of the parts are cooking yet!

Note:- The walls seem to be the hot ~~spots~~
spots, especially the east & south walls
of I¹³¹ cell.

11/2/50

12-8 ① Continued I¹³¹ Cell decontamination. It appears
sacks were gone just about as far as we're going.
General Background in the Cell is 800 mR/hr.
There is still one spot on East wall which defies
any treatment.

② Washed up most of the Brickle in 902 Bldg
and the stuff in the 706 D Bldg decon. room.

11/

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4

11-

4

11-

4

11-

4

11-

4

B1

11/

5

11/

5

12-

5

11/3/

8-

Sch

Two pieces in the later spot are still hot. One read 40 mln/hr. and the scrubber reading 100 mln/hr.
All the stuff on paper in front of the decontamination room is clean.

③ Continued Evaporating on Table Four.

11/2/50 ① The leak at W₂ has been located. It
8-4 is right on top of the tank. It will be repaired
Blower starting tomorrow.

- ② Cleaned out W₁ + W₂ diversion box.
- ③ Started operating evaporator at 35" L.L.
- ④ A-7 tank I.L. instrument plugged and was
unplugged by cleaning the pipe.
- ⑤ Ran dry to carbonate it all day.
- ⑥ Repaired Macomax at evaporator.

11-2-50 ① Removed MT Ca(NO₃)₂ slugs from dissolver at
4-12 Cell II.

Blood ② Evap. Operating at 35" L.L. + 40# steam.

③ Maint. installed a new dissolver in the I¹³¹
Cell.

④ Cleaned up around I¹³¹ Cell.

11/3/50

12-8 ① Continued Evaporating on table Four. Had to
sacks dump W₁ and W₂ to W₅. They were hot.

11/3/50 ① Instruments checked monitor probe at EV but
8-4 is working okay. CT was running about 1100 c's.
Schaich also repaired sumps L.L. & differential manometer.
② Laborers broke line at W₂ and placed

plugs in both ends.

③ Made hot sink inspection.

④ G.E. Phillips to training $\frac{1}{2}$ shift.

⑤ Continued evaporation.

⑥ Ramsey to cut all shift.

⑦ Millwrights worked on loading cubele.

11-3-50 ① Evap. operations about normal. St. 11

4-12 Foaming. A "hot spot" on the floor was cleaned up.

Blood ② Took cuts on Pressly's column. The last cut was taken at 11:00 PM.

③ Maint. worked on I¹³¹ Cell all shift. Leaks found were repaired.

④ Completed work for Schallert - 706-C.

11-4-50 12-8 H.B.

1. Continued Pressly's column in 908 ~~flask~~.
Took cuts at 5:47 A.M.

2. Continued evaporation and tank farm operation.

3. Sealed pin on E.V. to WOF valve. Around 6:30 A.M. by this time the valve was closed.
Maintenance replaced it and started evaporation up around 7:10 A.M.

11-4-50 8-4 G EP

continued EV at tank - form -

Change Battle on Pressly column -
in 908 at 11:00 A.M & 3P.M.

11-

11-5-

12-8

11-5-

11-

11/6

12-

50

11/6,

8-

Blau

11-4-50 4-12

Changed bottles at Presleys Col at 4:20 P
and 11:20 P

11-5-50 changed bottles at Presleys Col at 3:10 A.M. 7:10 A.M.

12-8 took readings on dummy run of I-131 cell every
2.00 hrs instructions E.K.

11-5-50 8-8

Changed bottle on Presleys col. at 11:00 A.M.
3:00 P.M.

Continued E.V at tank farm.

11-5-50 4-12

Changed bottles at Presleys Col. at
7:00PM & 11:05 PM

Checked ^{I-131} counting from 9:45 PM
shut off Refluxer ^{H2O} at 11:45 PM

11/6/50

- 12-8 ① Attended to Presleys column in 908 Bldg.
- and Sachs ② Checked Iodine dissolving. Cleaned up hot spots.
- ③ Ready to be resmeared.
- ④ Brought Title units to 902 Bldg.
- ⑤ Continued Evaporating on tank farm.

11/6/50

- 8-4 ① Zeroed all instruments at the evap., replaced
Blauer the pen on conductivity meter recorder. Repaired
leak in condensate line of coil 4.
- ② All new lights (floodlights) are
now installed in tank farm.

- ③ Millwright still working on loading
cylinder vacuum
- ④ Cast pump 706-D reinstalled & running.
This pump will run all of this week and
should be checked regularly.
- ⑤ Received 6 ton crane per new monorail
in 706-D.

⑥ Hood ventilation in 903 was hooked-up.

11-6-50 ① Evap. operating fairly well - 35" LL & 50# steam
4-12 - up to 1.20 Sp. Gr. Then we dropped to
Blood 40# steam.

② Finished the I^{131} stills. Boiled down I^{131} in
Rm. #10; there ~~are~~ are a few more liters to boil
down - all I^{131} soln. is in Rm. #10.

11/7/50

- 12-5 ① Continued Evaporating on Tonic Tamm.
Sachs ② Completed Iodine Run. 450 ml of Product
needed to be pulled out of Cell.
- ③ Dropped Voltage on Cottrell Precipitator just a
bit to keep it going.

11/7/50 ① The 6 ton crane was installed on the monorail
8-4 in 706-D

Blauer ② Work continued on exhaust hood over 903
bldg sink.

③ Laborers cutting grass at East & West Banks
and the Settling Basin.

④ Ran the steam turbines for 4 hrs.

⑤ Maintenance reinstated live power W.W.2

diversion baffle W2. Carpenters are preparing forms for the reinforcing concrete.

- 11-7-50 ① Recorded I¹³¹ data on dissolving in progress.
 4-12 ② Finishing evaporating crude P₃₂^(No Dead P added) at 906 Bldg.
 Blood ③ Had Maint. put up H.P. - "Hot signs" - (⊗) on
 906 Bldg.
 ④ Evaporator operating fairly well. 50# steam +
 35" L.L. up to 40" 1.18 Sp.G. - Then used 40# steam
 to prevent foam-over & boiled down OK.
 ⑤ There is a faucet leaking a small stream of
 water into the "Hot Sink" in N.W. corner of 706-C.
 Does Mr. Parker control this? If so, does he
 fix it, or do we?

11/8/50

- 12-8 ① Continued Evaporating on Table Tanks.
 Soaks ② Checked I¹³¹ dissolving in "C" Bldg.

- 11/8/50 ① Instruments replaced r.c. transmitter & gauge
 8-4 on A17 tank with gauge of 75" range.
 Blower ② Instruments replaced dampening unit on
 Evap. h.c. instrument
 ③ Drained W₁ to S.B. + W₂ to W5. (W₁) - 39 c/m³/ml
 W₂ - 799 c/m³/ml.
 ④ Loaned Clinton dug charge to 205 Bldg.
 ⑤ Maintained digging ditch for installation
 of oil gas line from 905 bldg to 900 area
 stack.

1802

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- 11/8/50 ① Evaporator operating fairly well.
4-12 ② Boiled down I¹³¹ in Rm. #10
Blood ③ Finished boiling down soln. for Ladd in 907.
④ There seemed to be a vapor-lock in the water still in 706-C, so it was over-flowing to the floor. By moving the over-flow line around, it started flow thru the over-flow line to the drain - no more trouble.

11/9/50

- 12-8 ① Continued Evaporating on Tante Tamm.
Sachs ② Continued Iodine Run. Ran Four stills. Couldn't get sample of 3rd one because of plugged sampler.
Continued boiling down in Room 10. Everything is now in Room 10. The 4 hr still has not been sampled.

- 11/9/50 ① Swapped the big truck to the garage for the yellow 8-4 1½ ton truck now in our posession. Our big truck will Blauer receive a general overhaul and be painted yellow.
② Evaporator operating very well.
③ Lead burners working on lead shielding around the resin cubicles.

11-9-50 ① Evaporator operating OK.

- 4-12 ② Took I¹³¹ data.
Blood ③ Watched Schallert's Column at 706-C
④ Cottrell Precipitator was cut back to 40 k.v., and ~~hasn't~~ hasn't given any trouble since.

- 11/10/50 ① Continued Evaporating on tank tank.
- 12-8 ② Continued Iodine Run in 706-C Bldg.
- Sacks ③ Checked Schallert's column in 706-C Bldg.
- ④ Iodine Run Status:
1. D.R. has 30 gms NaOH
 2. C.T. is empty and ready for scrubber.
 3. Still 20 min reaction period ends at 8 am.
 4. Scrubber sampled.
 5. Product C is empty.
 6. Hold up in Room 10 has between 1 and 2 liters in it.

11/10/50 ① Evap. operations O.K.

- 8-4 ② Maint. poured Vitsa bond in the bottom of the Blauer W₁ + W₂ diversion box and replaced the W₁ + W₂ lid. W₁ + W₂ inlet valves are open & the outlet valves are closed.
- ③ Lead burners placing shickling in new cubicles 706-D.

11-10-50 ① Evap. operations normal. 40# steam - 35" L.H.

4-12 ② Maint. painted 706-C Bldg. Floor.

Blood ③ Finished bailing down I¹³¹ Rm #10. Turned off equipment.

④ Worked on Schallert's column till 11:45 P.M.
Finished 16 L. water wash. - P shut off column.
Next, ready for citric acid soln.

11-11-50 12-8 GEP

consumed TV at tank farm.
Run #780

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11-11-50 8 - 4

Started Run # 781 at the evaporator

11-11-50 1 - Continued with RUN # 781 AT EVAP.

4-12

11-12-50 Dumb around 781 and started Run # 782 at E.V.
8-8

11-12-50 8 - 4

11-12-50 1 - started RUN # 783 AT EVAP.

4-12 2 - THE TIME BOOK HAS NOT BEEN HERE THIS
WEEK END ON THIS SHIFT.

11-13-50 ① Finished work on Schallert's column. (16L Citric acid
12-8 put thru column.)

Blood ② Evap. operating OK. 50°F steam & 35" L.H.

Bldg. #115 did some decontamination work
and we received water into W1 & W-2. The
dry wells were sampled this shift.

③ I¹³¹ was put thru glassware at Rm. #10. Ready
to take up product.

④ Over the week-end, one of the vacuum pumps
in 706-C failed & the belt burned off. We
were not notified - so started the other
pump - after locating source of trouble.

⑤ The blow-down on steam trap line at N.W.
Corner of 706-C bursted; likewise did the
blow-down on jet line of Parker's cell back

of 706-C. Mr. A.L. Harrod was shown these breaks.

- 11/13/50 ① Maintenance continued work on 900 area fence.
 8-4 ② Laborers continued work on new 105 off-gas line.
 Schmid ③ Lead barns continued work on resin cylinders.
 E.V. ④ Laborers backfilling at W1 x w2.
 ⑤ Day Well Results:

W1 - 120	W6 - 0	W11 - 5097
W2 - 405	W8 - 10454	W12 - 4809
W3 - 3	W9 - 30	
W5 - 0	W10 - 21	

- ⑥ Washed out W8 dry well. Will check again tomorrow.

- ⑦ Continued evaporation.
 ⑧ 105 Bldg to send me fan seal about 4PM.
 Sample and if count under 2500 c's/min
 send to S.B. If over - to W5. Per E.T.W.

11/13/50

- 4-12 ① Received Fan Seal from 105 Bldg. and drained
 sacks to Settling Basin. Both samples were under 1000 c's/ml.
 ② Sampled W8 drywell at 6 p.m. - 643 c's/ml.
 ③ Checked Pressley's column in 908 T5 bldg and
 changed bottle at 10:30 p.m. This cut need 4 R/hr
 over top of bottle. Next bottle change due at
 4:30 a.m.
 ④ Attended to Schalant's column in C Bldg. (See
 Note on clip board). The 44 liters of H₂O is now
 being blown through the column and will probably
 run another eight hours anyway. -

- (5) Checked Iodine dissolving in 706 C Bldg.
- (6) Finished up Ladd's evaporation in 907 Bldg.
- * (7) Continued P^{32} run in 906 Bldg. Run Status verbally to me 12-8.
- (8) Continued evaporating on the tank farm.
- (9) P^{32} extracting for 3 hours, started at 11:25 pm.

11-14-50 ① Evap. operations normal.

12-8 ② Checked Pressley's column and took sample blood cut at 4:30 AM.

③ Continued water wash thru Schallert's column at 706-C about 25L to go yet.

④ Recorded I^{131} data on dissolving. The off-gas failed at 6:00 AM.; added 2 liters of H_2O to the scrubber and regained off-gas.

⑤ Finished P^{32} extraction at 906, and continued boiling down Crude P^{32} . Run status passed on verbally to the 8-4.

11/14/50 ① Lead burners continued work on Resin vehicles.

8-4 ② Jones put up chain fence on S side of S.T.F. Schaich ③ sampled all dry wells.

④ Taggers covered coil & steam return line.

⑤ Maples to P^{32} & Lechner FI all shift.

⑥ continued work on 105 off gas line.

⑦ ran steam turbines 4 hours.

⑧ Dry well results:

W1-82	W4-0	W7-77000	W10-10
W2-1447	W5-0	W8-2	W11-361
W3-2	W6-8	W9-309	

⑨ Washed out W7 dry well. Will check again tomorrow.

⑩ Dropped W1 & W2 to S.B. (W1-5705, W2-61705)

⑪ Electrician tied 900 steam alarm to 110 volts. The switch on the far left hand side is the power switch. Do not turn off at anytime. Four alarms are now in operation.

⑫ W5 pad water line valve is shot. Order is in for repair.

⑬ Continued evaporating.

11/14/50

4-12 ① Changed bottle on Pressley's column in 908 Sachs Bldg at 10:30 p.m. Next due at 4:30 a.m.

② Followed Schalant's column work in 706C Bldg. The H₂O reached Resin level at 11:30 p.m. The 6N HCl is now going through. See Schalant's sheet of instructions.

③ Continued P³² operations in 906 Bldg. Run 26 is going through the column to Cold Evp. About 100 ml of Product solution is to go. See P.B.'s instructions for finishing up this run. Run 27 is in P2 and will have to remain there until Run 26 clears the Cold Evp, the column is regenerated etc.

④ Proof - Read some P³² run sheets.

⑤ Continued Evaporating on tank form.

- H-15-50 ① Took sample cut on Pressley's column at 4:30 AM. 11/15
 12-8 ② Finished proof-reading P_{-}^{32} run sheets. 4-
 Blood. ③ Evaporator operations normal. Soc
 ④ Put 6N HCl soln. thru Schallert's column
 at 706 C. After the addition of about 6L.
 activity rose to about mid scale on
 Lo-0.1. Started soln. from Column #2 to
 still then and activity leveled off, and
 after addition of about 5-6 L. Fell off
 sharply to H₁ - 3.0 scale. Shut off the
 Column here to boil down a full still of
 soln. Still boiling. Cut off heat at shift
 change. 11/1
 ⑤ P_{-}^{32} product P#26 is in the product bottle.
 The resin column is regenerating with 6N.
 HCl. 12
 ⑥ P_{-}^{32} in the beaker in hood at 906. (P_{-}^{32} 406)
 was boiled down after it was discovered
 that the hot plate would not heat-Used the
 other hot plate, and fumed with fuming
 HNO_3 and took down to dryness with one
 10 ml. of H_2O . Now at this point at shift
 change.

11/15/50

- g-4 ① Lead burns continued work on resin tanks.
 Schach ② continued 105 off gas line installation
 ③ Sampled W7 dry well - 280/min.
 ④ Schaffer to FI + masles to P_{-}^{32} .
 ⑤ Continued evaporating. 11/1
 8-
 Schach

- 4:30 AM 11/15/50 ① Boiled down Iodine in Room 10 and sampled.
 4-12 ② Put P^{32} Product ~~on~~ from P2 on Column
 Sachs at 11:30 p.m. It will run several shifts.
 ③ Continued Schallert's column in C Bldg. Filled
 up the still and boiled down. Turned off heat
 lamps at 11:40 a.m. with about 500 ml left to go.
 ④ Continued Evaporating on Tangle Farm.

11-16-50 ① Evap. operations normal. Scrubbed up
 12-8 a hot spot on the floor.

Blood ② P^{32} #27 is flowing thru the column - about
 200 ml. to go. Gold evaporator was operated
 part time, since vaporization was a little
 faster than rate of flow thru the column.

③ Continued operation of Schallert's column
 - 706-C. The second addition of H_2O (200 ml.)
 is in the still ready to evaporate at shift
 change.

Fuming HNO_3 was added, fumed.

HNO_3 was added, boiled down

HCl " " " "

200 ml. H_2O was added, boiled down.

200 ml. H_2O " " - ready to boil down.

11/16/50 ① Millwrights tore down 3rd level hoist to replace
 8-4 gears.

Schaefer ② Continued work on 105 off gas line.

③ Schaefer to FI & Mayles to P^{32}

④ Continued evaporating.

- 11/16/50 ① Continued Schallert's column runs in C Bldg. The
 4-12 125 ml 0.1 N HCl has been added to shift ~~1~~² and also
 Sachs the 125 ml of H₂O. This solution is ~~to~~ ready to be
 moved to Col.[#] 3 through the reactors when Col.[#] 3
 is ready. Meanwhile, 500 ml H₂O is being pushed
 through Col.[#] 3 to Resin level under #10 air press.
 At shift change, there is no 100 ml left. The
 air pressure is off and vent open.
- ② Removed I¹³¹ Product from Run #10 glassware
 and stored at North door, 902 Bldg.
- ③ Continued Evaporating.

- 11-17-50 ① Started boiling down run at evaporator at
 12-8 3:00 AM. Jetted run to W-5 - sp G = 1.11. - Drained
 Blood EFT to W-5 - rinsed with H₂O. Added 6
 Carboys of HNO₃ to EFT + water to make 40"
 in Evap. tank - Then sparged EFT for ½ hr.
 Drained HNO₃ soln. from EFT to Evap. and
 started boiling down at 40" at 5:45 AM. Cooled
 and jetted remaining ^{Evap} soln. to W-5 at 7:00 AM.
 Washed down Evap. cell interior with 2
 H₂O washes. - Evap. tank was empty about
 7:40 A.M. - EFT was filled with 60" of H₂O
 for shielding.
- ② Continued work on Schallert's Column. At shift
 change 0.2 M Citrate soln. is passing thru
 Column #3.

11/17/50 D made hot sink inspection.

8-4 ② Installed two probe unit into EV tank. One Schmid flange with seven probes + 1 spare, the other with one probe and 1 spare line.

Repaired condensate activity recorder
Set EV spk to 1.00 from 7.04. Hydrometric reading on sample gave 1.00.

③ Schaper to FI and samples to γ^32 all ship
④ Started EV up at 3 PM. Set L.L. control at 35" and 50 psi.

⑤ The charge code for the Probe job at the evaporator is 3902-794. The work order is 373493.

11/17/50

4-12 ① Continued Schalent's columns and shut down Sachs after bringing Product to 902 Bldg, North door.
② Continued Evaporating on tank farm.
③ Turned off hot-sink water in 907 Bldg at 11 p.m.

11-18-50 12 - 8

Shut off cold water to hot drain in 905 Bldg.

11-18-50 8-4

1- Continued with Run # 789 At the EV2P.

11-18-50 4-12 H.B.

1- Continued evaporation and tank farm operations.

170

11-19-50 12-8

1.

- 11-19-50 1. CALLED MAINT. TO REPAIR BROKEN STEAM
8-4 TIED WEST OF 706-C, MAIN HEADER.
2. DUMPED RUN # 789 AND STARTED 790
AT TANK FARM EVAP.

3.

11-19-50 4-12 H.B.

1. Continued evaporator and tank farm operations.

11/20/50 ① Continued leaching.

- 12-8 ② Took FT carrier to V105 Blag.
Schaeich ③ brought Pile units to 902

11/20/50

- 8-4 ① Laborers removed the old concrete bases
seals over the hot-labs that the hood blowers used
to sit on.

- ② Continued Evaporating on the tank farm.
③ Owing's to Packing group all shift.
④ The drainage ditch just south of E.pond was
widened.

- ⑤ Started W7-W5 jet to bring up pH of W5.
Cut off when W7 reaches 10' 9"; started at
10' 11" in W7.

6. We were supposed to receive two fan seals
into W1, west 10: a.m but they havent been dumped as
yet.

11-2

4-

Bloo

11/2

12

Sch

11-20-50 ① Started cleaning the monster at 903. Used H₂O 4-12 + Citric acid. - it now contains a soln. of Blood Citric acid. Seems badly contaminated. The monster outside in the truck was covered.

- ② Evap. operations normal. Sent W-1 & W-2 to S.B. Shut off W7-W5 & steamed the line $\frac{1}{2}$ hr.
- ③ I¹³¹ - Loaded 3rd Hanford slug. - Did 3 Coating removals & started dissolving. Maint. was called to tighten some leaking unions on steam lines of I¹³¹ Panel Board.
- ④ Work on Schallert's column continued. Still adding 4.3 PH Citrate soln. to column #3 - no. activity rise yet. Made up some 4.3 PH Citrate soln. -
 - Started treating RE-2 Columns #6 & #2 on the funnel rack. Washed #6 & #2 with 0.25 M H₂SO₄ Soln. & 250 ml. of H₂O. About ready to collect product by addition of 6N HCl & H₂O as per instructions on P#13. Product bottle is marked & ready.

11/21/50 ① A16-W12 blow pot line is leaking.

- 12-8 ② Cleaned out inside of monster with soap, Schalch citric, water, & weak acid. Still reads 100% but slug cuts out all reading. Scrubbed & smeared top, bottom, & side after removing cocoon. It is okay and tagged.
- ③ Replaced micromay chart gears at FI all.
- ④ Checked FI dissolving at "c" slug.
- ⑤ Continued citrate solution thru col 3

no peaks as yet. Took cuts of col 2 + 6 and stored in product bottle in all doorway.

③ Continued evaporation.

④ Received two fan seals at shift change.

11/21/50

8-4 ① Received two fan seals into W1 and W2 Sacks and dumped same into S.B.

② Installation of foam level recorder at Exp. was begun this afternoon. Should be complete by 4:30

③ Tatted WC-1 to W5.

④ Received waste into W5 from 706 H.B.

11-21-50 ① Changed bottle on Pressley's Column at 10:00 P.M.

4-12 ② Checked Schallert's Column at 706-C. No blood activity rise yet. Continued adding citrate at 4.3 PH. (To-day some waste from the I^{131} cell was transferred to Schallert's Cell. Note H.P. Survey for hot spots)

③ Finished boiling down Crude P^{32} at 906.

④ Status of I^{131} 706-C: -

— The last still of I^{131} is in the still ready to start distilling.

— Boiled down I^{131} all shift; there is some to go yet - Rm. #10

Note: As I^{131} is boiled down in Rm #10 the activity rises. At 2 ft. from the hood about head level, it now reads about 55 MR/hr.

11/2

12

Sch

11/

8-

Sa

6 11/22/50 ① B12 probe is out. reported by R.N. 11/19/50.

12-8 ② Sampled all dry wells. Result

Scheich W12 - 998 W2 - 240 W9 - 25
 W6 - 0 W1 - 29 W7 + W4 dry.
 W3 - 4 W10 - 2
 W5 - 4 W8 - 97

added water to W7 and then sampled. No results as yet.

③ Took cut on Bradley's column at 4 AM. checked activity.

④ Finished stills and boil down in Run 10. Sampled F1 and shut down Run 10.

Steamed out off gas line for 4 hours.

⑤ Continued running citrate three
lit. 3.

⑥ Continued evaporating.

11/22/50

8-4 ⑦ Maintenance repaired leak in A4 and A16
Sacks Pots - W12 fine.

⑧ Instrument man removed short Probe
from Evaporator tank, and replaced Bradley
Flange. The probe was covered with crad
all the way up to about 4" from the top.

⑨ Ran both steam turbines for three hours.

⑩ Pipefitters replaced ~~the~~ the manifold Water
header valve in the Evg. gallery.

⑪ New water lines in 206 D Bldg were lagged.

⑫ Continued Evaporating on the tank farm.

174

11-22-50 ① Evap. Operations Normal. The S.B. sample pump failed about 7:00 P.M. The sampler pump motor was replaced by a new one. The sampler from the R.P. was placed in operation at the S.B. and the new one will go to the R.P.

- ② The hand brake on the pick-up doesn't work - needs repair.
- ③ Mr. Schallert's column was shut down at 4:35 P.M. as per his instructions, see instruct. note.
- ④ P^{32} is now passing thru column. The hot sample reading SR/hr. was cleaned up at 9:06.
- ⑤ Changed sample bottle on Pressley's Column at 11:00 P.M., and passed on information to the next shift.
- ⑥ The new sampler pump should be installed at the R.P. since we had difficulty in getting it assembled - motor shaft was too long. It is now assembled and operates ok and ready to be placed at the R.P.

11-23-50 12-8

Changed bottle at Pressley's Col at 4:40AM
Put 250 ml rinsel in P^{32} Col at 4:35AM
Installed new pump at RP

- 11-23-50 1- Continued with RUN # 792 AT THE EVAP.
8-4 2- CHANGED BOTTLE ON PRESSLEY'S COLUMN AT 10:30AM.
3- CUT BACK WATER FLOW ON COTTERELL PRECIPITATOR
FROM 60 TO 50 OPERATING OK

11-23-50 Contained Run #792 at EVAP. is ok
 11-12 Changed Bottles on Pressley's col. at 1030pm

11/24/50 ① Changed bottles on Pressley's column at 4:30am.
 12-8 ② Jettied 2" from W7 to W5 to raise pH.
 Schach ③ Continued evaporating.

11/24/50

8-4 ① Pipe laggers worked on 706D steam and water lines
 Sachs ② Crossed up both turbines.
 ③ Continued Evaporating on the tank farm.

11-24-50 ① Evap. operating ok. The door check on the
 4-12 evaporator door froze and would not close the
 Blood. door. Maint. disconnected the door check. Also
 the light switch on manometer at D.B. failed;
 a direct connection was made ^{by Maint} & the switch
 will be replaced to-morrow.

② Changed bottles on Pressley's column at 4:57PM.
 + 11:00 PM. Bottle #12 taken at 4:50 PM. was over-
 flowing. Filled the head tank at shift change.
 ③ Cleaned up the little 1-RPM Bodine Motor &
 called H.P. to smear it so that it can be sent to
 shops for repair.
 ④ Cottrell Precipitator signaled and was reset.

1. CONTINUED WITH EVAP.

2-CHANGED PRESSLEY'S BOTTLE AT 5:00AM.

3-~~THE~~ WEST VACUUM PUMP IN 706-B FOUL'D OUT
 AND ALMOST BURNED OFF THE BELTS BEFORE IT
 WAS NOTICED. EAST PUMP RUNNING BUT A LOT OF NOISE.

11-25-50 8-4 N.B.

1. Continued tank farm and evaporator.
2. Damped run 793 & started run 794.
3. Continued Pressley's column. Charged bottle at 3:00 p.m.

11-25-50 Continued with F.V. at tank farm.

11-26-50 4-12. Changed Bottle on Pressley col. at 8:45 P.M.

12-8 1- CHANGED Pressley's Bottle in 908 At 3:00 A.M.

11-26-50 2. COTTERELL P.P.T. KICKED OUT 2:30 A.M. COULDN'T
GET IT STARTED UNTIL ABOUT 6:00, LOWERED WATER
F104

3- MAINT. REPAIRED WEST VACUUM PUMP IN 706-D

11-26-50 8-4 - N.B.

1. Continued evaporator and tank farm operations.
2. Charged bottle on pressley's column.
at 9:00 A.M. & 3:00 p.m.

11-26-50 Damped Run #794 Started Run #795 at F.V.
Changed Bottle on Pressley's col. at 8:50 P.M.

11/27/50

- ① Cleaned Schleifer's columns in C Bldg. Run Saks H₂SO₄ solution through Col #2 all shift.
- ② Continued Evaporation on tank farm.
- ③ Changed bottle on Pressley's Col. at 2:50 P.M.
- ④ Brought Pipe units to 902 Bldg.

11-2

8

B1/

11/2

4

Sc

- 11-27-50 ① Instr. Maint. checked B12 Probe - It is OK.
 8-4 ② Knocked several hundred pounds of ice
 Blood off the back of 706-D.
 ③ Maint. worked on west vacuum pump over the
 hot labs. - work to continue. The East pump
 is running.
 ④ Evaporator operating OK. Started getting
 W10 - W5. Got the jet started about noon
 after thawing out the steam line. The
 snow was removing from S.B. walk &
 chains were put on the truck. Maint. was
 called to repair the light switch at the
 O.B. manometer and also to repair a
 steam leak N. of W2.
 ⑤ Electrical Maint. worked on the decontamination
 machine at 706-D decont. room. - Converted
 to 440 V.

- 11/27/50 ① Checked distillation column in 907.
 4-12 ② Charged bottles on Brusley's column at 9PM
 Schaeich ③ Finished filling down F1 in Run 10. Sampled
 F-1.
 ④ Finished washing UNH off Schallert #2
 column and started 1st CN HCl cut.
 ⑤ Repaired RT pump and put into operation.
 ⑥ W10 to W5 jet stopped at 6 PM. Started up
 at 8PM. Rodded tank gave approx 6 1/2 ft.
 jet should quit at 5 ft.
 ⑦ Continued evaporating
 ⑧ W10 to W5 jet quit at 10:30 PM. Can't get it started.

- 11/27/50 ① Could get the W10 to W5 jet to operate. Looks like wire hit bottom.
- Sachs ② Started P^{3/2} run. 1st extraction is ready for cooling at 8 a.m. Run book in 906.
- ③ Continued Schalent's column run. Operating still. Still ready to be filled up again at 8 a.m.
- ④ Checked Russell's column.
- ⑤ Changed bottle on Pressler's column at 2:45 AM.
- ⑥ Continued evaporating on tank farm.

- 11-28-50 ① Evaporator operating OK. Replaced flood-light at 4½ W-12. Steamed line W10-W-5 Blood for ½ hr.; then started jet from W7-W-5.
- ② Maint. on East vacuum pump continued.
- ③ Ran the steam turbines for 4 hrs.
- ④ The hand-brake on the truck was repaired but needs further adjustment—tomorrow.

- 11/28/50 ① Gear shift on picking muds repaired.
- 4-12 ② Wooden steps to fusion column control panel Schach mud repaired.
- ③ Moved up 3rd level & re-setup.
- ④ Getting W7 to W5 all shift.
- ⑤ Worked on Brad-all all shift. Still a few hot spots (5m) on arm & bracket. Rest of truck down to bldg background. Have to be checked outside of bldg.
- ⑥ Shut down Russell's column.
- ⑦ Continued evaporating. Too foamy ones.
- ⑧ Continued stopping vol 2 and boiling stills.

- Looker 11/29/50 ① We somehow lost the 1st extraction in the
 12-8 T-32 "donkey" in 906 Bldg, at least we couldn't
 Sachs draw ~~any~~ on such any product solution out of the
 "donkey" after the cooling period. Reextracted again
 with 1500 ml of HNO₃ solution. Cooling from 4:30 a.m.
 ② The W4-W5 jet was all shift.
 ③ Continued work on Gradall in 903 Bldg. Cleaned
 up some hot-spots inside bucket and on arm.
 Everything seems to be down to Bldg background now.
 ④ Continued evaporating on table Fan.
 ⑤ Do not Run Schalents columns.

- 11-29-50 ① Repaired binding gear shift on pick-up Truck.
 8-4 ② Evap. operating OK. - Between 9-10 A.M.
 Blood the long probe in the evaporator was
 removed and the short probe was replaced.
*Spare part
are in the
Evap tank*
 W-7-W-5 jet was turned off at 8' & the
 line was steamed for $\frac{1}{2}$ hr.; also sampled
 the stream at the end point. - Cleaned up
 storage space at the evaporator.
 ③ The painters started painting the electrical
 Panel Board.
 ④ The steam coils to the heating system 706-D
 sprung a leak. Turned off unit because
 it leaks too badly.
 ⑤ Cleaned up the "remaining" 2 probes (long probe
 at evap.) at 706-D decontamination room.
 ⑥ We have our 1½ ton truck back from the
 paint shop.

11/29/50 ① Shut down fission column at 8 PM due
4-12 to lack of exposure time. Verbal to B. Phillips
Schaech ② Run steam & water on Bradall arm all
shift. Not much success.
③ Continued evaporating.

11/30/50

12-8 ① Continued P^{32} runs in 906-Bldg. The Product
Sacks solution is in Col. Hold up vessel ready to start through Col.
② Continued Evaporating on tank farm.

11-30-50 ① Evaporator operating ok. A leak in the
8-4 line from W12-W5 was found in a flange
Bleed in W12 pit. It was repaired by replacing
one of the bolts in the flange.

② The short probe at evaporator was
replaced with another. It was observed
that the resistance was 3 meg-ohms
without the evaporator steamed up.
After the vapor temperature reached
100° the resistance was 250,000 ohms.

This is about the sensitivity of the apparatus;
thus the light remains lit!

③ Painter started painting 706-D woodwork.

④ Maint. continued work on 3rd level hoist.

⑤ The probe taken out of the evaporator was
decontaminated and turned over to health
physics for smearing.

⑥ Cleaned up 706-D decontamination room.

⑦ Maint. started general clean-up of the tank farm.

11/30/50 ① Finished 732 ton column and added
tips 4-12 water wash. all time at shift change.
- all Schieck ② Continued evaporating.

12/1/50

12-8 ① Continued Evaporating on Table Tann.

Sachs ② Finished P³² run and submitted samples to lab.

Col. 12-1-50 ① Evap. operations normal. cleaned up the
8-4 tank farm in general.
Blood ② Painters continued painting ~~on~~ the
woodwork at 706-D; also the electrical P.B.
③ Maint. has just about completed the repair
job on the 3rd level hoist.
④ Made the hot sink inspection.
⑤ Drained the filter-box on the hot-off-gas
system.

12/1/50 ① Cleaned out 706-D equipment cabinets.

4-12 ② Continued evaporating.

Schieck ③ A8 L.L. plugged. Equalized lines.

12-2-50 12-8 H-B.

1. Continued evaporator & tank farm operations.

12-2-50 8-4 GEP

Dump Rm#804 and started Rm#807 -
at the evaporators

in K-farm.

12-2-50 4-12

Dumped run #807 and started #808
at the evaporator.

12-3-50 12-8 N.B.

1. Continued evaporator and tank farm operations.

12-3-50 8-4 GEP

Paused run #808 and started #809 -
at the evaporator

12-4-50 ① Evaporator operations normal.

12-8 ② Delivered the pile-units to 912 Bldg.

Blood ③ Cleaned up some "hot" spots at the
evaporator sampler.

12-4-50 ① Received U waste into W9 from W12 from 706-A.

8-4 ② Millwrights had to tear down the 706-D crane
Blauer again. It makes a terrific amount of noise.③ Painters still painting woodwork in 706-D also
the electrical panel board.

④ Instrument dep't mounting fixtures in 706-D

⑤ 706-C I-131 jettied U from hold-up tank to W9.

⑥ Jettied WC-1 to W5, dropped W1 to S. Basin.

12/

4-

50

12-

12-

B1

12-

8-

Bar

- 12/4/50 ① Had maintenance replace cotton-pip on East
 4-12 valve of P²² "donkey"; then ran a "dummy"
 Sacks extraction using 1500 ml of H₂O. Pulled 1400 ml
 out of donkey.
 ② Continued Evaporating on T. Funn.
 ③ Checked Col 3 in C Bldg. Product solution
 still going through Col #3

- 12-5-50 ① Evaporator operations normal. (The door
 12-8 check at the evaporator needs repair.) -Called in
 Blood ② Checked Schallert's Col #3 in to Maint.
 706-C - Product ~~solution~~ solution is slowly passing
 thru col. #3 to header #4 at 6# pressure as
 per instructions. About 75 ml. passed thru
 the Col. this shift. This rate of flow seems
 questionable and as a result all inlets &
 out-lets were checked. All lines & valves
 appear to be properly adjusted. - (?)
 ③ Called H.P. to check the air monitor at 906. It
 had been operating at 2K on yellow signal - the
 relay is stuck.

- also 12-5-50 ① Replaced leaking gasket in W₁₂ to W₅ jet-line
 8-4 in W₁₂ jet pit.
 Bauer ② Painted shack near W₁ & W₂^{metal}
 ③ Riggers covered old pot pit with grating
 ④ Had to make extension handle for water
 valve to operate steam turbine. The 125 H.P. x 75-
 H.P. electric goes all down. The steam turbine fan
 will shut down at 6:00 P.M. Ran the small

turbine for 4 hrs.

- (5) Maintenance finished fixtures in 706-D between lavatory and operating room.
- (6) Maintenance making forms to put metal man hole covers on all dry wells etc in tank farm.
- (7) Put new tube in S. basin sampler. Got very little sample for 11 A.M.
- (8) Sent truck to garage to fix brakes and investigate the noise in left front wheel.

12/5/50

- 4-12 ① Continued Evaporating on Tank Farm.
- Sachs ② The Starter box on the 12.5 H.P. Blower burned up at 6:30 p.m. after starting motor at 6 p.m. Started up turbine - motor has been tagged out.
- ③ Shut down 706 C Bldg Col #3 at 4:30 p.m.
- ④ Continued D³² Run in 906 Bldg. First two cans ready to be discarded, new can is in pig, boiling down in glassware.

- 12-6-50 ① Evaporator operating OK. ~~at opposite heat~~
- 12-8 ~~After half hr. of operating the evaporative feed valve needs to remain closed.~~
- Blood. ② Boiled down crude P₃₂ at 906.
- ③ We could not get the waste sulfur out of the "donkey". The switch on the east mantle was found in the off position. It was turned on, but after about an hour the "donkey" still refused to discharge. Further investigation proved that the east mantle was not heating and it was checked for continuity - There is no

continuity. Operation ceased here!

Note:- While checking also the continuity of the variac, a shower of sparks came from it. (?) For this cause, the variac may also need replacing.

③ Instr. Maint. adjusted the Brown recorder at 906 in order to make pt. #4 print constantly in the same place. This instrument & part of P³² is OK now, Praise The Lord!

12-6-50 ① Started the W7-W5 jet. Sampled stream 8-4 into W5 and requested analysis of Cl, P_n + Sp_{ga}

Blower ② Maintenance started testing & repair of 706-D building ventilation system heater

③ Painters still painting in the building

④ Electricians removed burned out primary starting circuit transformer. The motor is being wired directly to the line voltage and will not use the two speed starting circuit. The alarm system is O.K. and needed no repairs.

⑤ Evaporator operating very well

⑥ Maintenance tightened packing in W12 to W5 jet line. See ⑧

⑦ Maintenance put 706-D case back together again. It is less noisy than before but it will be taken apart once more and the gear teeth filed down again.

⑧ Discharge side of W12-W5 jet leaks at flange. Also W12-W5 valve needs packing tightened. Will repair tomorrow.

- 7
- ⑨ Radded W10 tank - 5' 0"
 - ⑩ 706-D ventilation system okay.
 - ⑪ Change to P_{32} all shift.
 - ⑫ Electrocions replaced fuse at S.B. electrical outlet.桑德斯 in operation.

12/6/50

- 4-12 Sachs
- ① Continued Evaporating on tank farm.
 - ② Continued getting from W4 to W5.
 - ③ Continued Rimshaw's column in 706-C Bldg.
 - ④ Continued P_{32} run in 906. Variac on E mantle or Donley is shot and we didn't melt out type Sulfur. No other Variacs of that size around.

12-7-50 ①. Evap. operations normal.

- 12-8
- ② Checked Rimshaw's column. - H_2O flows thru blood very very slowly at 8# pressure. About 2 in. in the column is an estimate of flow. Checked valves & lines and all seem to be in order.
 - ③ Carried P_{32} run from Crude evaporator to P-2 - about ready for the column.
 - ④ 440 v. has been down all shift to Ø 706-D + C. It has been cut off at the transformer station back of the bldg. - As a result, the vacuum pumps in 706-C+D are down. Since this vacuum was not required, the Lab. Shift Superv. did not see fit to call anyone in to put the line in operation.
 - ⑤ S.B. analysis was checked since it was 1161. A second check gave 76 c/m/ml. (?)

There was a very small sample due to power failure to the sampler. The D.B. analysis for 3:00 AM = 3071. Had it checked = 3007. Something is out of line but could not locate the trouble.

12/7/50 D continued painting 3rd level 706-D.

8-4 ② Tried tightening loose flange W12-W5 line Schmid but no success. Will pull jet assembly out tomorrow.

③ Linemen put 440 volt circuit back into operation. W. vac pump running.

④ Continued jetting W7-W5. Sampled at 3PM.

⑤ 706-NB waste tank was completely full and probably overflowing thru jet line to S.B. They were decontaminating a cell.

⑥ W12 automatic jet working O.K.

⑦ Maintenance brought column vehicle down to "D" bldg. Started assembly & testing.

⑧ Continued evaporating.

⑨ Laborers cleaned off tops of hot labs and both filter vehicles.

⑩ West pond is overflowing to White Oak Creek.

⑪ Drained water off W4 pad which was seeping into W4 tank.

⑫ Lights out at D.B. & R.P. sampler. Didn't get them replaced before shift change.

12/7/50

9-12 ① W7 → W5 jet quit at 4:30 pm with W7 L.H. at 5' Sacks. Steamed out line and shut all valves.

- ② Completed P³² run; Product in 9D2; samples in the lab.
- ③ Checked Rimshaw's columns in 706 C Bldg. Passed on information verbally to 12-8.
- ④ Continued Evaporating on tank farm.

12-8-50 ① Tank Farm operations normal.

12-8 Blood ② Continued Rimshaw's columns- 706-C. Added neutralized PH 3.5 Citrate solution to Column #1. At shift change, 1000 ml. of PH 3.5 citrate is being put through column #1. Added PH 3.5 citrate to Column #2 all shift.

12/8/50 ③ Millwrights continued work on 3rd floor crane
8-4 ② Painters continued work on 3rd floor.

Schick ③ Pipefitters postponed W12 job till Monday.

④ Continued installation of product crane hot lines.
⑤ Received Chicago truck with 21 drums. Could not get it to jett. Finally started siphoning at shift change. One drum is cracked due to solution freezing. Other drums may be frozen up.

⑥ Continued evaporating.

12/8/50
4-12

Saeks

① Continued Evaporating on tank farm. Haven't been able to get from W5 to E.F.T. since 9 p.m. tried all three times. Had set town down and cleaned up but still didn't do any good. Passed on dope to G.E. Phillips concerning this.

12-9-

12-9-

4

12-

12-

- ple
ssed
- (2) Disposed of 7 drums of Chi. waste into W5 and 13 drums into W7. Washed out all drums last one washed out at 11:20 p.m.
 - (3) Continued Schaefer's columns in "C" Bldg and shut down for weekend. See sheet on office wall.
 - (4) The Chicago truck bed has not been jettied out.

d 12-9-50 12-8- SEP

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The jet that is hooked up to W-5 to 5 FT is the one that was at W-2 and the one on top of W-5 tank is the ~~old~~ regular jet from W-5 to 5 FT could not get jet to work tall.

129-50 8-4

Started run #818 at the evap.

4-12 1- MAINT REPAIRED JET AT 11-2

2- STILL HAD TROUBLE AT THE EV, however the JET STARTED AT 11:25 PM.

3. DUMPED RUN #818 AT THE EV.

4- RECEIVED WASTE B-30 TO 11-5.

12-10-50 12-8

Started run #819 at the evaporator

12-10-50 8-4

1- DUMPED RUN #819 AND STARTED #820 AT THE EVAP.

190

- 12/11/50 ① Bought 1 doz pr. rubber gloves from stores.
12-8 ② Slept out home by nurse.
Slept ③ Drained off gas + ventilation filters.
④ Lights out east side + front of 706-D.
⑤ Scrubbed and smeared 20 drums. Drum #39 was powdered into W5 and cleaned but was not smeared.
⑥ Took FT sludge carrier to 105 Bldg. Brought back to 706-C.
⑦ Brought 800 units to 902.
⑧ Continued evaporating.

12/11/50

- 8-4 ① Pipefitters removed W12-W5 jet, put in Sachs new gaskets, and reinstalled. No leaks now.
② Pipefitters replaced trap and valve on steam line to Evap. Evap was shut down for about an hour while these repairs were being made.
③ Carpenters started work on rebuilding platform at W12 tank.
④ Electricians began installations of new hoist monorail Bus Bars
⑤ Millwrights continued work on 3rd level hoist.
⑥ Continued Evaporating on the tank farm.
⑦ 3rd level crane job is complete although it is very noisy under a load.
⑧ Catwalks were placed over the new mono-nail in 706D Bldg.
⑨ Removed cover and checked W1 and W2 plug-cock valves. They are 0.15.

12-11

4-1

B10

12/

12

See

- 12-11-50 ① Evaporator operating OK. The air sparger is
4-12 still on W-5 tank.
- Blood. ②. I¹³¹ dissolving going ok. Readings on the hour.
③. Continued Rimshaw's Column at 706-C. The
third cut of 500 ml. from header #4 was put
on Col #4-1. Then 100 ml. of 2M-8 pH citrate
was put thru Col #3 to header #4 - diluted,
and all added to Col. #4. There is about
100 ml. passing thru Col. #4-1. ~~Then~~ The
200 ml. H₂O wash was not added to col #4-1.
④. P³² - Couldn't get anymore S out of the
"balking" donkey. - Added 1500 ml. of 2N HNO₃
and brought up donkey to temperature.
Then tried in vain to get this out of the
donkey! No luck. - Then started to heat
up again and we were going to try to
empty the donkey out of the other end.
This might have been ready about 1200
mid-night, but Fred Schaefer isn't
Coming in, so shut everything off.
Note:- Off-gas line to donkey appears
broken. -(That is before we tried
opening the valve.)

- 12/12/50 ① Brought one sulfur can from Pil to 706. It is
12-8 ^{P³²} pig.
Schaefer ② checked F.T. dissolving in 706-C.
③ Put chains on pickup.
④ Continued evaporating.

192

- 12/12/50 ① Shut off W5 air spanger. Jet works O.K.
8-4 ② Painters continued work in 706 D Bldg.
Sachs ③ Laborers cleaned out a lot of jungle around
900 stack area.
④ Ran both turbines for four hours.
⑤ Electricians continued work on new hoist
in 706 D Bldg.
⑥ The W12 to W5 jet is leaking again on the
exchange side of the jet. Was not repaired
today.
⑦ Continued Evaporating on T.F. One foam-over
at 1.16 Sp.C.

12-12-50 ① Evaporator operations normal.

- 4-12 ② Boiled down I¹³¹ in Rm. #10. ~~that~~ All crude
Blood was transferred & finished.
③ Continued Rimshaw's Column at 706-C. Put 250 ml.
 H_2O wash thru Col. #4-1. Put 2 - 100 ml. Ph-8.0
Citrate thru Col #3. The first cut going on.
Col. #4-2 was finished and two other batches
above were put on Col#4-2. At shift change
started 100 ml. of Ph-8.0 Citrate thru Col. #3, but
shut down with 50 ml. in header #4-(no operator 12-8).
Put up some lead shielding to reduce radiation.
④ Continued P³² - 1st & 2nd extracts now boiling
down in 906. Took up 1st extract & made 2nd
extract, and emptied S out of donkey. Then
heated melter-(at this point shift change)
Brought down 1 can of S - it is in the pig at 906.

12/13/50 ① Finished boiling down P^{32} in 906.

12-8 ② Loaded donkey and shut down at 906.

Schisch ③ Continued evaporating.

12/13/50

8-4 ① Headburners worked on Resin Column cabinet in Sacks 706D Bldg.

② Painters continued work in 706D Bldg.

③ The leak in the W12-W15 jet was repaired.

④ Continued Evaporating on the tank farm.

⑤ Poured concrete around W12 valve pit

12-13-50 ① Evaporator operations normal.

4-12 ② Boiled down I 131 . Prepared to sample F-1 about 11:10 P.M. but could not get any off gas at Run 10, although there was offgas at I 131 Cell. Therefore didn't get F-1 sample. Checked the off-gas line to master valve; everything appears in order. Did not locate trouble.

③ P^{32} 2nd extract is in extract receiver. Did not unload the donkey. Boiled down P^{32} and started run thru. Part of soln. is in S-1 and part of it is in S-1 pot. - Soln. went very slowly thru S-1 resin. Stopped here and left vacuum on S-1.

④ Ranshaw's Col. 706-C — Put 3 cuts on Col #4-3. Third cut is still passing thru #4-3 Col. Pot 250 ml. H₂O wash thru Col #4-2. Instruction sheet is on top of Col.

194

12/14/50 ① Cleaned shifts panel boards.

12-8 ② Continued evaporating.

Schmid

12/14/50 ① Painters continued work in 706 D Bldg.

8-4 ② Electrician's finished up work on new Mono-mat
Sacks Buss-Bars in 706 D Bldg.

③ Instrument men put in 24" probe in Evaporator.
Seems to be working O.K.

④ Leachbunnies worked on Resin Column Cubicle.

12-14-50 ① P^{32} is going thru the column to the #2 Evap.

4-12 Removed S from the donkey & sampled.

Blood ② Continued Rimshaw's column. Took 2 - 100 ml.
Cuts on Col. #3 and added three cuts to
Col. #4-3.

③ Evaporator operations normal. The "probe"
does work OK. It goes on & off as desired
according to existing conditions. More details
are listed in the Evaporator Log at the
evaporator. Foam-overs seem to develop at a
Sp.G. of about 1.20 - since considerable difficulty
was encountered at this point, started boiling
down to Sp.G. of 1.35. Tried to start the evap.
at 50# steam but activity gained without
indication of foam by the probe. Operating at 40#.

12/15/50 ① Replaced tygon tubing in all samplers.
 12-6 ② Electrician recharged 125 & 15 HP motors
 Schmid ③ Continued 9³² thin column and added
 H₂O wash.

④ Continued evaporating. Gas leak indicator
 not working.

⑤ Light at S.B. sampler needs rewiring. Jolts
 you when touched.

12/15/50

8-4 ① The old A16 fan motor is in the pick-up and is
 Sacks to be taken to 706-D Bldg low storage. We couldn't
 unload it because truck was off mono-rail this
 afternoon.

② Checked fire W12-W5 jet fan leaks. It is O.K.
 ③ Instrument man removed probe from Evap
 and reinstalled blank flange.

12-15-50 ① The old A16-fan motor was stored in low
 4-12 storage. While moving the over-head hoist
 Block back from this point, it stuck on mono-rail
 Curve. Left it at this point place. —

② The electric truck was covered as requested.
 ③ Did the housekeeping - 706-D.
 ④ Evaporator operating OK. - Normal operations.
 ⑤ Took 3 cuts off Col #3 for Rimshaw. Put the
 same thru Col #4-2. The last cut is half on
 Col. 4-2 & half in header #4. Header #4 is
 dripping slowly so that this cut will finish
 over the week-end. This shuts down operations here.
 (over)

196

⑥ Merry Christmas & A Happy New Year
to all!
- and I will have a good vacation!

12-16-50 12-8

Started run # 828 at the evap.

12-16-50 1. Continued with Run 828 at the EVAP.

8-4

12-16-50 4-12 H.B.

1. Continued with evaporator and tank farm operations.
2. Dumped run 828 and started run 829.

12-17-50 12-8

1. DUMPED RUN # 829 AND STARTED # 830
AT EVAP.

2-CLOSED DISTILLED WATER LINE IN WEST
HOT LAB THAT DRAINED 706-D STILLS.

12-17-50 4-12 H.B.

1. Continued evaporator and tank farm operations

12/18/50 ① DRAINED OFF-GAS FILTER BOXES.

12-8 ② TOOK IODINE SLUG CARRIER TO 105 BLDG.

Each ③ BROUGHT PITE UNITS TO 902 BLDG.

④ CONTINUED EVAPORATING.

⑤ HAD ELECTRICIAN REPAIR 706-D HOIST.

⑥ BROUGHT 3 I¹³¹ SLUGS TO 706-C BLDG.

- Year
in!
L.
- 12/18/50 ① Painters continued work in 706-D. Relettered
8-4 parts of electrical panel board panels + pipettes.
Blauer ② Pipefitters started piping resin cubicles
③ Repaired door + horn on pick up truck.
④ Electricians installed 2 lights over N. hot lab.
⑤ Continued Evaporating.

12/18/50 ① Checked FT dissolving 706-C.

④-12 ② Continued evaporating.

Schaich ③ Received and installed new glass funnel
for P^{32} melter. Started melting out
sulfur but donkey opening plugged
and sulfur poured into tray. Tried unscrewing
tray but it wouldn't budge. Broke up sulfur
with screwdriver and started taking tray
off. Ran out of exposure time at this
point. Worked to 12-8.

12/18/50

12-8 ① Power Failure at 7:09 A.M. lasting about fifteen
minutes. Slide valve on small turbine was frozen
shut, turned H₂O on Iodine dissolver jacket.

② Removed pan and hot sulfur from P^{32} donkey.
Dropped and melted out plugged sulfur, melted out
three cans and started extraction at 7:30 a.m.

③ Continued Evaporating.

12-19-30 ① Painters working in 706-D

8-4 ② Pipefitters still piping up cubicles

Blauer ③ Electrician wiring up shield-motivator

④ Maintenance fixed float at W-10-A

reads 4' 8" or about 4" low.

- (5) Maintenance repaired steam trace line on Na₂CO₃ addition line to W₂
 (6) Ran ^{both} steam turbines four hours.

12/19/50 (1) Finished placing hot solution on Pressley's column 4-12 in 908 and started distillation. First cut Schmid taken at 11 P.M.

- (2) Finished 1st still, 3rd still, and making 1st cut on 4th still at shift change. Cooled down in Room 10 all shift.

- (3) Continued evaporating.

12/20/50

12-8 (1) Charged bottle on Pressley's column in 908 Sachs Bldg at 4 a.m.

- (2) Had to shut down ¹³¹ glassware at 5:45 A.M.
 Can't make transfer from crude Evaporator to distillation flasks. Line on valve must be plugged.

- (3) Continued Evaporating on the tank farm.

12/20/50 (1) Painters still working in 706-D

8-4 (2) Castelby waste tanks installed in Resin Cubicles Blauer (3) Painters painted map on cover of valve pit back of 706-C

- (4) Maintenance installed sleeve preparatory to pouring manhole at W-9.

- (5) Raised h.h. at cap. to 35".

- (6) Installed connection to W-12 line from drain port of off gas line from 105 bldg.

12/2
4-

John

12/2

Sac

12/2
8-

Blau

12/2

4-
Sot.

CO₂

12/20/50 ① Filled 3 sulfur cans. Fourth one going at 4-12 shift change.
Schaich ② changed bottle on Pressley's column at 8 PM.
③ Continued evaporating.
④ Sighted out at R.P. pole.

down
at
1/22
1

12/21/50

- 12-8 ① The alarm on Cottrell precipitator isn't working properly. Light was off, unit was down, but the bell wasn't ringing.
② Filled Sulfur cans in 906 and picked up remaining cans.
③ Changed bottle twice on Pressley's column in 908 Bldg.
④ Had instrument man put new chart on Brown Recorder in 908 Bldg.

12/21/50 ① Painters continued in 706-D
8-4 ② Pipefitters continued piping using cables in Blauer 706-D.
③ Poured concrete around new manhole at CO-7 and around new manhole covers at W1 & W2 dry wells.
④ WC-1 filled up to overflow & backed into all gas lines. Cause of rapid fillup unknown. Cottrell precipitator dumped its hold up tank ^{overnight}.
⑤ Repairing valve on condensate side of coil L. Coil L is shut off outside the bldg. This is the by-pass valve around the steam trap!

12/21/50 ① Finished fitting WC-1 to W5.

4-12 ② Scrubbed 908 Bldg. H.P. measured O.K.

200

(3)
(4)

- ③ Instruments refilled off-gas manometer for P^{32} dosing.
- ④ Maintenance finished repairing valve on coil E bypass.
- ⑤ Took two cuts off Pressley's column. First one at 2:30 A.M. They are filling fairly rapidly. Better check.
- ⑥ Instruments recorded chart on Brown inst. in 906.
- ⑦ There are 8 lights out in 906.
- ⑧ Sys. G. pen at EV was reading low. Instrument man tied up all shift. Adjusted pen to give a close reading but it should be checked and adjusted.
- ⑨ Melted two cans of sulfur into dosing and made 1st extraction. It is cooling at shift change. Brought another can from 105 and left in pig.
- ⑩ Continued evaporation.
- ⑪ Filled 4 sulfur cans. 5th one in melting at shift change.

12/22/50

- 12-8 ① Electrician replaced burned out neutralizing Sachs switch on P^{32} dosing.
- ② Charged bottles on Pressley's column in 908 Bldg. at 7:30 AM.
- ③ Continued Evaporation on the tank farm.
- ④ Got only 200 ml out of 2 P^{32} extractions.

- 12/22/50 ① Maintenance regasketted + tightened end flange on vent. duct from 706-C+D just opp. physics of solids Bldg.
- 8-4 Blower ② Painters still working in 706D.

12/22/

4-12

Schair

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- ③ Pipefitters working on culicles 706-D
 ④ Received Chicago truck loaded with drums
~~2~~ 2 drums + 1 put sent to W7 The others
 went to W5.

12/22/50 ① Filled drums with hot water, took truck
 4-12 to W5, emptied drums, took truck to 903,
 Schieck unloaded drums, cleaned drums and
 1 pot. H.P. measured but no results. Drum
 that was frozen did not thaw out. 12-0 used
 please empty & clean.

- ② W5 to EFT jet would not operate after trying
 usual methods to get it started. Hooked up air
 line thru steam header and blew back thru jet
 for $\frac{1}{2}$ hour. Jet started working okay. W5 sparger
 to be left on until this stuff clears up.
 ③ Sp. B. pen at EV went haywire but lowering
 bubble rate brought it back. May have to have
 instruments checked it.
 ④ Took two cuts off Bessels column. Gystone
 about 1A.M. They are running close to 3 hrs.
 Will use rest of took wishing one
 and all

A Very Merry Christmas

VERNON RAIL LINE
 1143 X

Finis
 H